Electrical World

A Review of Current Progress in Electricity
and Its Practical Applications

Volume LXXXVI

July 4 to December 26, 1925

McGRAW-HILL COMPANY, Inc.
Tenth Avenue and Thirty-sixth Street
NEW YORK CITY

Engin.
Wahr

GENERAL INDEX

Entries from the Digest of Current Electrical Literature are indicated by (D) Digest

PAGES BY ISSUES

July 4	1 to 52
July 11	53 to 102
July 18	103 to 154
July 25	155 to 202
August 1	203 to 252
August 8	25 to 300
August 15	30 to 350
August 22	351 to 398
August 29	399 to 446
September 5	447 to 498
September 12	499 to 548
September 19	549 to 600
September 26	601 to 680
October 3	681 to 732
October 10	733 to 782
October 17	783 to 834
October 24	835 to 884
October 31	885 to 934
November 7	935 to 986
November 14	987 to 1036
November 21	1037 to 1088
November 28	1089 to 1138
December 5	1139 to 1190
December 12	1191 to 1240
December 19	1241 to 1292
December 26	1293 to 1342

A

Accident prevention:
——Buses, taping substation (E. C. Lindsay), 69.
——Fire extinguisher on synchronous condenser, *174.
——Fuses, reducing trouble from wrong use of (W. E. Nance), 465.
——Hold-off tags for feeders and cables (G. H. McKelway), *123.
——Hydro-electric plants, safety in, 381, 763.
——Indication of energized circuits (W. J. Ducey), *369.
——National Safety Council Public Utilities Section meeting, 381.
——Power company helps prevent fires, *376.
——Switches, sealing safety service-entrance, 945.
——Customer, without ledgers, 860.

Administration (See Management).

Advertising. (See also Public relations):
——Appliance campaign, 1177.
——Boston, Edison Electric Illuminating Company's, *77.
——Costs and results of public utility, 23.
——Electrical: its forms, characteristics and design (C. A. Atherton) D, 1267.
——Electrical, profitable load in, *705.
——Engineering and (editorial comment), 303.
——Public Utilities, Association, 805.
——Sign, campaign, *484.
——Towers, capitalizing floodlighted transmission (Ernest J. Teberg), *1164.
——Water power, roadside billboard on, *1061.

Africa:
——Victoria Falls power scheme (E. F. Rendell) D, 1319.

Air breakers (See Circuit breakers).

Airplane:
——Power surveys, speeds up (J. B. Beadle), *311.

Alabama:
——Muscle Shoals (See under Hydro-electric development).
——Power Company:
Cherokee Bluffs hydro-electric project, 85, 580.
Coosa River development, 1017.
Financial growth (Paul Willard Garrett), *201.
Lock 18 development (F. G. Switzer), *795.
Muscle Shoals plan, *914.
Muscle Shoals steam-power plant, 379.
Office building, new, *1067, (S. Nesselroth), *1149.
Peak load, 710.
Power, short of, 580.
Rural electric service, 179.
Short-circuit calculating table (S. Murray Jones), *847.

Alabama (Cont.):
Transmission plans, 710.

Alarms (See Signals).

Alaska lumber industry, electricity in the, 1208.

Alternators:
——Alexanderson high-frequency, parallel operation of (J. L. Finch) D, 181.
——Self-synchronizing (D), 25.

American Bar Association to discuss public utility law, 431.

American Electric Railway Association convention, 712, 762.

American Electrochemical Society convention, 479, 711.

American Engineering Council:
——Program, 962.
——Water-resource survey, 1118.

American Institute of Electrical Engineers:
——Committee appointments, 331.
——Conventions:
Pacific Coast, 285, 578, 691.
Power generation committee's report, *5, editorial comment, 1.
Report of annual, *11, editorial comment, 1.
Seattle (editorial comment), 784.
——"Engineman," directors approve use of term, 285.
——Meetings for 1926, p. 1014.
——Nominations for, *1269.
——War Department's program for industrial mobilization, learn about, 1221.

American Society for Testing Materials, committee meetings, 964.

American Society of Agricultural Engineers convention, 32.

American Society of Civil Engineers convention, 864.

American Society of Mechanical Engineers:
——Convention, 1167, 1169.
——Meeting, annual, 1119.

American Welding Society convention, 430, 965.

Analogs, solution of electrical problems by (editorial comment), 156.

Annunciators (See under Signals).

Appliances (See also Commercial activities and Manufacturing and markets).

Arc welding (See Welding).

Argentina central stations grow, 996.

Arkansas:
——Central Power & Light acquired by Middle West Utilities, 82.
——Ozarks Hydro-Electric Power Company wins permits for hydro-electric developments, 1272.
——White River Power Company asks permit, 761.

Arresters (See Lightning arresters).

Associated Manufacturers of Electrical Supplies:
——Consolidation with Electric Power Club, proposed, 1015.
——Section officials elected, 234.

Association of Electragists International:
——All-metal propaganda, N.E.L.A. opposes, 1278, editorial comment, 1241.
——Convention, 966, editorial comment, 682.
——Trumbull, some plain talks from Governor, (editorial comment), 735.

Association of Edison Illuminating Companies:
——Meeting, closed, 863.
——Officers of, 914.

Association of Iron and Steel Electrical Engineers convention, 82, 333, 479, 578.

Associations and Societies:
——Directory of, 50.
——Fruits of association work, the best fruits of (editorial comment), 987.
——Conventions:
Dividends, making them pay higher (editorial comment), 681.
Parallel sessions cost too much (editorial comment), 2.
Season, fall (editorial comment), 499.
——News of, 33, 86, 138, 187, 235, 286, 334, 384, 433, 481, 531, 583, 667, 715, 766, 816, 868, 918, 967, 1019, 1070, 1123, 1173, 1224, 1275, 1326.

Atomic energy (editorial comment), 602.

Australia:
——Adelaide Electric Supply Company's Osborne station (F. W. H. Wheadon), *1097.
——Distribution practice in (F. W. H. Wheadon), *221.
——Melbourne suburban railway systems' automatic substations (R. M. Harvey) D, 280.
——Osborne, Adelaide, power station and transmission system (D), 758
——Substations in, transformer (F. W. H. Wheadon), *466.
——Transmission practice (F. W. H. Wheadon), *1159.

Austria:
——Hydro-electric development and possibilities, 558, 1204.
——Railways:
Electrification (P. Dittes) D, 130.
Mountain (D. Winkler) D, *425.
Overhead construction of electrified (H. Luithlen) D, 26.
——Vienna hydro-electric power supply (J. Schlögl) D, 377.

Auxiliaries (See Generating stations).

B

Barometer of electrical business (See Business).

Batteries, storage:
——Compound, electric heat used for (F. W. McGraw), 468.

Bavaria, power distribution (A. Menge) D, 25.

Bearings:
——Cylindrical, ring-lubricated, calculation of temperatures and heat losses in (Sven Hjerten) D, 1166.

Beck, Sir Adam, death of, *379, editorial comment, 351.

Beggs, John I., death of, *865.

Belgium, load dispatching in, 1306.

Bids for apparatus, analyzing (Thomas E. Penard), 948.

Billing:
——Dayton (Ohio) Power & Light Company's system, 860.

Boats (See Ships).

Boiler room (See also Boilers):
——Air, conditions affecting use of preheated (D), 473.
——Ashes and soot deposits, heat conductivity of (G. Borelius and Arthur Erikson) D, 526.
——Brooklyn Edison's Hudson Avenue station, combustion control at (W. C. Holmes), *628.
——Design, future trend of (Thomas E. Murray), 649.
——Economy, an urge to securing high, *172.
——Flue-gas sampling trouble overcoming (W. G. Shurgar), *418.
——Furnace-wall construction, rugged (W. G. Shurgar), *520.
——Labor, method of handling (W. G. Shurgar), 703.
——Smoke abatement in Providence, 222.
——Stoker and pulverized coal plants, economic comparison of (H. S. Colby), *1301, editorial comment, 1294.
——Windbox damper, micrometer control for (W. G. Shurgar), *369.

Boilers, steam (See also Boiler room):
——Furnaces for pulverized coal (A. G. Christie) D, 473.
——Plant design, future trend of (Thomas E. Murray), 649.
——Soot deposits in (Bengt Afzelius) D, 525.
——Water jacket saves moving subway (R. S. Carroll), *1108.
——Weymouth station's 1,200-lb. (D), 861.

Boilers, mercury:
——Hartford Electric Light Company's, *607.

Book reviews (See also Books received):
——Alloys, corrosion-resistant, heat-resistant and electrical resistance, 132.
——Alternating currents and transients (F. M. Colebrook), 131.
——Alternating-current circuits (J. M. Bryant and J. A. Correll) 1218.
——Aluminum and aluminum alloys, metallurgy of (R. J. Anderson), 131.
——Australia and New Zealand, Melbourne, electrical directory of, 80.
——Beleuchtung von Eisenbahn-Personenwagen, Die (Dr. Max Buttner), 131.
——Business organization, fundamentals of (Webster Robinson), 131.
——Chemistry in modern life (S. Arrhenius and C. S. Leonard), 1218.
——Chemistry of engineering materials (R. B. Leighou), 132.
——Coils and magnet wire (Charles R. Underhill), 760.
——Copper and alloys, chart for (Charles H. Hughes), 1218.
——Dynamo, its theory, design and manufacture (C. C. Hawkins), 1218.
——Economics of public utilities (L. R. Nash), 760.
——Electrical engineering problems (J. G. Pertsch, Jr.), 1218.
——Electrical engineering, the theory and characteristics of electrical circuits and machinery (C. V. Christie), 760.
——"Electrician" annual tables of electricity undertakings for 1925, the, 80.
——Elektrische Gleich-richter und Ventile (A. Gunther-Schulze), 80.
——Electrolytic separation of magnesium from magnesia (Ichitaro Sakai), 132.
——Engineering index for 1924, 132.

*Indicates illustrated articles

Book Reviews (See also Books received) (Cont.):
——Esselborn's Lehrbuch der Elektrotechnik, 760.
——Fernmeldeleitungen Beim Elektrischen Zugbetreib der Deutschen Reichsbahm (O. Brauns and W. Wechmann) D. 280.
——Furnace efficiency, how to build (J. W. Hayes), 80.
——Furnaces, industrial (W. Trinks), 1218.
——Generators and motors, fundamental principles of (Prof. F. E. Austin), 132.
——Gleichrichter, der Quecksilberdampf (Kurt Emil Müller), 760.
——Grands Réseaux electriques à haute tension, Construction et exploitation des, 132.
——Hydroélectriques, Usines (Charles L. Duval), 1218.
——Industrial electricity (Chester L. Dawes) 1218.
——Laboratory manual of electrical service (R. O. Buck and H. E. Frost), 80.
——Leadership in industry, personal (D. R. Craig and W. W. Charters), 131.
——Lighting fixtures and lighting effects (M. Luckiesh), 80.
——Lighting, technology of (M. E. Zelentsoff), 80.
——Low pressure, production and measurement of (M. H. Newman), 80.
——Machinery erection, electrical (Terrell Croft), 131.
——Market analysis, its principles and methods (Percival White), 132.
——Matter, electricity and the structure of (L. Southerns), 280.
——Measurements and meter testing in the power station, electrical (E. S. Lincoln), 760.
——Meter practice, electricity (H. G. Solomon), 132.
——Mines, mechanical underground loading in metal (Charles E. Van Barneveld), 132.
——Muscle Shoals, Ala., America's greatest dam (William Benjamin West), 760.
——Nature of things, concerning the (Sir William Bragg), 131.
——Petroleum, supply and demand, American, 760.
——Physics (L. B. Spinney), 1013.
——Physics in industry (Mellor, Oxley and Desch), 280.
——Piles primaires et accumulateurs (Féry, Chéveneau and Paillard), 1013.
——Power station operation. Vol. 1. (Electrical Times), 280.
——Regulation, guiding principles of public service (H. C. Spurr), 1218.
——Relativity and common sense (F. M. Denton), 80.
——Specifications, national directory of commodity, 1925 (Department of Commerce), 1913.
——Switchgear for electric power control (E. B. Wedmore and Henry Trencham), 280.
——Telephonic communication, transmission circuits for (K. S. Johnson), 132.
——Telephony, an outline of automatic (William Aitken), 280.
——Transmission line formulas (H. B. Dwight), 760.
——Transmission towers, 132.
——Ultraviolet rays, the chemical action of (C. Ellis and A. A. Wells), 1013.
——Unfall, der elektrische (Prof. Dr. Med. Stephan Jellinek), 131.
Books received, 80, 280, 1013, 1218.
Boston (See Massachusetts).
Brazil, Corcovado railway (D), 1217.
Brooklyn (See New York City).
Bulgaria, hydro-electric development in, 1047.
Bureau of Standards (See Standards).
Bus:
——Structures and cells, steel forms used to build (H. A. Moody), *1312.
——Structures of pipe framing, Connecticut Light & Power Company's, *786.
Busbars, electrodynamical forces in (Fredrik Dahlgren) D, 473.
Business (See also Manufacturing and Markets):
——Barometer of electrical, June, 1925, *170, July, *510, August, *698, September, *891, October, *1101, November, *1308.
——Barometer, wanted, a dependable (editorial comment), 1037, comment (F. S. Dewey), 1208.
——Coolidge reassures "true business," 1126, editorial comment, 1089.
Byllesby & Co., H. M. (See also under Financial):
——California-Oregon, acquire, 961.
——Executive on timely subjects (John J. O'Brien), *161.
——St. Paul Gas Light Company, to buy, 961.
——Wisconsin Public Service, buy, 134, 234, editorial comment, 203.

C

Cables:
——Bergen, Norway, underground fiber conduits for high-tension, in (Lars Rivenes) D, 1165.
——Dielectric losses in:
(Frank A. Brownell), *218.
(P. Dunsheath), 220.
June 13, 1925, issue (R. W. Atkinson), correction, 21.
Measurement of, at high voltages (B. Hague) D, *707.
——Faults, locating circuit (S. Aronoff), *1041.
——Faults, locating underground, *1297.
——150,000-volt, tests (A. M. Taylor) D, 229.
——High-tension, analysis of (Dr. K. Konstantinowsky), *1102.
——High-voltage (P. Dunsheath) D, 1266.
——Hold-off tags for feeders and (G. H. McKelway), *123.
——Insulating material, new (H. W. L. Brückman) D, 1319.
——Joints, dipped—insulated (A. Eimers) D, 129.
——Lightning, protective value of (R. Stein) D, 959.
——Loaded submarine, the (editorial comment), 353.
——Loading truck, low-, *1314.
——Reel problems, overcoming, *123.
——Splice boxes, faults in (F. Flückiger) D, 1011.
——Submarine:
Conduit line (G. H. McKelway), 752.
Insulation for, 1156.
Naval experience in laying (Frank Luckel), *1258.
Telephone (P. Craemer and E. Muller) D, 1217.
——Telephone, New York-Chicago, 430.
——Testing methods (F. M. Farmer), 20.
——Underground:
Calculation of the electrical problems of transmission by (Donald M. Simons) D, 707.
Conductor joints for (C. G. Watson), *371.
——Vibration in transmission, overcoming (G. H. Stockbridge), *1304, editorial comment, 1295.
California:
——Commission upheld by court, 232.
——Dam, experimental tests of arch, 1323.
——Feather River Power Company's plant, 28, 761, 1325.
——Great Western Power Co.
San Francisco distribution systems, value of, 961.
——Los Angeles:
Chamber of Commerce water and power report, 1119.
——Melones power pact approved, 581.
Oregon Power Co.
Byllesby interests acquire, 961.
Copco, No. 2 plant (P. O. Crawford), 85, *889.
Power plant, public dedicates new, *472.
——Pacific Gas & Electric Co.:
Berkeley fire losers sue, 664.
Display window, commercial customers use, *1060.
Distribution network of (S. J. Lisberger) D, 78.
Hetch Hetchy power, 27, 428, 1016.
Hydro-electric system (J. P. Jollyman) D, 129.
Municipal ownership, helps check (editorial comment), 53.
Pit River No. 3 plant, *185, *233, (E. A. Crellin), *450, *455, editorial comment, 448.
Sales program, 77.
Service under difficulties, restoring, *1071.
Vaca-Dixon substation, *569.
——Power projects, proposed, 476.
——Sacramento-Merced transmission line, 814.
——San Diego Consolidated Gas & Electric Corporation's station B, ...1271
——San Francisco:
Condemnation opposed, 1272.
Great Western Power Company's distribution systems, value of, 961.
Hetch Hetchy development 27, (D), 180, (M. M. O'Shaughnessy), *206, 428, 1016.
Jubilee, illumination for, 426, *667.
Moccasin plant, 81, 231, 381, editorial comment, 205.
Rate reduction, asks, 133.
——San Joaquin Light & Power Corporation:
Balch station, 475.
——Santa Barbara earthquake, 27, *81, editorial comment, 53.
——Southern, Edison Co. :
Alhambra testing laboratory (W. R. Frampton), *304.
Ballard on future development of California, 764.
Budget, 863.
Laboratory, Alhambra electrical standardizing (W. R. Frampton), *411.
Long Beach station, addition to, 814.
Santa Barbara earthquake, 27, *81, editorial comment, 53.
Saturation in California, no, *689.
Shaver fake project, 281.
Stanford laboratory, new (Andrew R. Boone), *745.
Transmission and transients, 220,000-volt (R. J. C. Wood) D, 1165.
Transmission line, new, 427.
Ward, George Clinton, and associates honored, *1221.
——Western Power Corp., North American Company acquires, 527.
Canada:
——British Columbia E'ectric Railway Company's Stave Falls plant, 431, 765, (D), 861.
——Carillon project, 430.
——Central-station industry, 1322.
——Hydro-electric development in maritime provinces, 965.
——New Brunswick:
Government badly defeated, 331.
Grand Falls of St. John River, (C. McKay), 69, 965.
Plant, capital outlay of provincial, 1167.
——Niagara Falls power, distribution of, *464.
——Ontario:
North, Insull interests enter, 1014.
Toronto power rate increases, 282.
——Ontario, Hydro-Electric Power Commission:
Beck, Sir Adam, dies, *379, editorial comment, 351.
Magrath for taking more power from Falls, 1119.
Magrath succeeds Beck, 577.
Project to produce 400,000 hp., new, 133.
Niagara power, distribution of, *464.
Quebec may come to rescue of, 1324.
Report, annual, 332.
Rural service (L. W. W. Morrow), *790.
St. Lawrence River data, 578.
Toronto outdoor transformer stations, *552.
Toronto streets 110-kv. line in, *1092.
——Power corporation of, controls Hamilton utility, 135.
——Power exportation:
Civil engineers debate, 864.
St. John development and the, tax (C. McKay), 69.
——Quebec:
Ile Maligne development, 15.
Ontario Hydro, may come to rescue of, 1324.
Power export restrictions against, 1069.
Saguenay River, 183, *256, *1015.
——Saguenay River developments, 183, *256, *1015.
——St. Lawrence River development, 30.
——Southern, Power Company's new plant, 233.
——Toronto (see Ontario and Ontario Hydro-Electric Power Commission).
——Winnipeg Electric and Hydro-Electric System reach agreement, 284.
Carbon black by the electric arc, production of (D), 911.
Central stations (see Generating stations and Hydro-electric Plants).
Charts (see under Records).
Christmas tree:
——Coolidge will light national, 813.
Cincinnati (see Ohio):
Circuit breakers:
——Foreign (C. W. Denny), *122.
——Oil:
Operator's viewpoint, from an (E. C. Stone) D, 377.
Performance, *225.
Purifying oil (Lee Hinchman Clark), *562.
Swiss and foreign (D. Heusser) D, 707.
Trip coils, overload capacity of (R. Edler) D, 1011.
User's view of (E. C. Stone), *57.
Civil Engineers (see American Society of Civil Engineers).
Cleveland (see Ohio).
Coal (see also Statistics):
——Anthracite, burning (W. A. Shavoy and R. C. Denny) D, 278.
——Distillation and the central station, low temperature (George A. Orrok), 620.
——Handling at the Goshen, Indiana, station *518.
——Legislation, 578.
——Mining:
Private enterprise must regard its obligations (editorial comment), 1191.
Strike, anthracite (editorial comment), 301.
Strip, desirable load (Albert Clabaugh), *753.
——Southwest, results obtained with a (D), 707.
——Strike, anthracite mining (editorial comment), 301.
Code:
——National Electrical, A.E.S.C. approves 1925, p. 211.
——National Electrical Safety, sectional committee for, parts 2 and 4 (Roy C. Dwyer), 69.
——West Virginia cities adopt, 1059.
Coffin, Charles A., medal to consumers Power Company, *29.
Collection and credit (see Manufacturing and markets).
Colorado:
——Colorado Springs plan to finance utilities purchase, 866.
——Public Service Association convention, 331.
——Public Service Company's Valmont station (R. R. Thorne) D, 1165.
Commercial activities and practices:
——Appliances (see also Merchandising):
Domestic, consumption and revenue from, 228.
Survey in western state, 1164.

*Indicates illustrated articles

Commercial activities and practices (Cont.):
——Brick-yard power load, selling a 300-hp. (Marshall V. Robb), *1253.
——Collections and public relations (A. B. Wollaber), 842.
——Complaints reduced 81 per cent, potential, *1263.
——Consumer, the instruction of the (editorial comment), 785.
——Cooking (see also Merchandising and Ranges):
Cafeteria has 125-kw., load, *177.
Cafes, for roadside, *573.
Chicago's largest commercial, load, 858.
Commercial, prospects, following up, 422.
Hotel kitchen, an electrified (Robert I. Smith), *277.
Institutions, for (H. E. Kahlert), *1213.
——Davidson, J. E., visualizes commercial outlook, 1162.
——Denver's third electrical home, *23.
——Hotels:
A high-load-factor market ready made (editorial comment), 254.
Chicago, selling power to, *990, editorial comment, 989.
——Industries department as load builder, new, 907.
——Ice business, utilities and the (A. J. Authen Reith), *797, *844, editorial comment, 836.
——Kitchen equipment float, *325.
——Lighting:
Advice to the consumer, who should supply (editorial comment), 302.
Better Home, Campaign report, 127.
Billion dollar business available, a (M. Luckiesh), *737, editorial comment, 733.
Department, need of (editorial comment), 1192.
Departments, aggressive (editorial comment), 785.
Exhibits, organized (Ernest J. Teberg), *423.
Fixtures, good business in (M. Luckiesh), *995, editorial comment, 989.
Home, standardization of (editorial comment), 551.
Home, will bring enormous business, proper (editorial comment), 3.
Installation advertised, new, *228.
Lamps as load builders, portable (M. Luckiesh), *1251, editorial comment, 1242.
Load, increasing the residential, *892, editorial comment, 886.
Pennsylvania-Ohio Power & Light Company's methods (C. R. Tracy), *787.
Service department (D. J. Finn), *943.
Store, campaign in Spokane, 807.
Street-, business active in Alabama, 1318.
Street, from utility viewpoint (G. H. P. Dellmann), *1203.
——Load is off-peak, what? (B. J. Martin), *1316.
——Load factor:
Hotels: a high-load-factor market ready made (editorial comment), 254.
Problem, a national business, 956.
——Lone-wolf policy outlives its day (editorial comment), 885.
——Machinery in the home, drift toward (editorial comment), 1242.
——Men with vision, public utilities need (E. W. Lloyd), *557, editorial comment, 551.
——Merchandising:
Appliance sales relation to family income, *523, editorial comment, 499.
Appliance selling, ground-floor (editorial comment), 683.
Appliances: Wanted—more courage (editorial comment), 402.
Cookers, employees sell 1,676 fireless, *421.
Display counter, standard, *1114.
Domestic use of energy, raising, 276.
Empire District Electric Company's outside sales force management, 323.
Hurley prize, the (editorial comment), 353.
Lamp sales, Doherty subsidiary companies' (Fred I. Smith), 1045.
Lesson from commission rate decisions (editorial comment), 399.
Lighting, selling better kitchen (H. H. Courtright), *571.
Lighting units, Pacific Gas & Electric's campaign on kitchen, 375.
Nashville Railway & Light Company's, 1010.
Oklahoma Gas & Electric Company's (J. W. Devereaux), *1059, editorial comment, 1038.
Opportunities, neglected (J. E. Davidson), 413.
Philadelphia, joint merchandising for, 956, editorial comment, 936.
Public Service of Northern Illinois, more and better business campaign, *22.
Quota board for salesmen to stimulate sales, *1265.
Radio (A. M. Wilson), 699.
Radio, A new trend in (editorial comment), 734.
Radio, make it another standard household electric service (editorial comment), 501.
Range campaign, Minneapolis General Electric's (H. A. Dahl), *805.
Range load, building an (H. J. Gille), 471.
Range sale adds $30,000 gross revenue, Spokane (W. T. Ryan), 126.
Range sale, dealers and central station join in, 421.
Ranges shown to be inexpensive, 958.
Refrigerants, salesmen should not belittle competitive (editorial comment), 253.
Refrigeration exhibit, Boston Edison's, *127.
Refrigerator sales, profit on (S. D. Heed), 789.
Refrigerators, should central stations merchandise? (Winston Paul), 111, comment (C. W. Ridinger), 269.
Refrigerators, utilities' part in selling (H. E. Young), 896.
Sales leadership (editorial comment), 551.
Sales $11.10 per meter, 1114.
Should a power company do? (editorial comment), 1038.
——Motors, brickyard uses 1,000 hp. in (G. R. Mitten), 126.
——New-business plans outlined year in advance, 177.
——New business department made self-supporting, 908.
——New York Edison Company's survey of appliance and lighting load, *375.
——Pacific Gas & Electric sales program, 77.
——Power load:
Brick-yard, selling a 300-hp. (Marshall V. Robb), *1253.
Census, value of industrial (F. M. Weller), *1051.
Cement plant shut-downs cut, 376.
Central-station service most economical (H. C. Thuerk), *1112.
Individual drive in electrical manufacturing plant, *1010.
Oil electrically, economies of pumping (S. G. Gassaway), *374.
Power a small percentage of manufacturing cost, 472.
Purchased power shows marked saving over private plant (R. H. Larson), 75.
Purchased power versus private plant (E. F. Wilson), 755.
Railroad shops, purchased power saves $15,000 in, (J. G. Horgan), 907.
Salesmen being trained for other industries, are? (editorial comment), 3.
——Pumping costs reduced two-thirds, gravel, *1318.
——Purchased power vs. private plant (E. F. Wilson), 755.
——Ranges (see also Cooking and Merchandising):
Apartment hotel installs 260, p. *755.
Load curve, effect on, 523.
Load developed through co-operation, 227.
Northwest, survey, *706.
Serviced at net cost of 40c per call, 704.
Servicing and complaint costs, 323.
Tomorrow's users must be made today (editorial comment), 54.
——Rates to encourage new business, zone, *704.
——Record system, improved customers' (Malcolm Barton), *514.
——Refrigerators (see also Merchandising):
Air refrigeration in large buildings (editorial comment), 1140.
Icemen take common-sense view of, situation (editorial comment), 1090.
Load builder, as a, *807.
Rate, Utah company establishes domestic, 276.
Service costs, 24.
Servicing costs, checking, *860.
User can be made an electric service "prospect," how every (editorial comment), 937.
Wisconsin Power & Light gets return of $3 per capita, *957.
——Residential service gains fastest in winter, *1265.
——Revenue per dollar invested, increasing (John F. Gilchrist), *61.
——Rural service needs, department for, 523.
——Sales activity, putting a cash value on (editorial comment), 937.

Commercial activities and practices (Cont.):
——Sales department leadership, the trend in (editorial comment), 501.
——Service connection at Cambridge, quick, 1010.
——Service, use of tags to expedite, *1215.
——Show on wheels, electrical, *908.
——Signs, electric:
Industrial, push (editorial comment), 449.
Northern States Power Company's load, *705.
——Switches, sealing safety service-entrance, 945.
——Trucks, electric:
Business, aids to developing, 1061.
Charging equipment sold on deferred payments, 571.
Cincinnati, in, *859.
Load is off-peak, what? (B. J. Martin), *1316.
——Utility service to industry, economic value of (editorial comment), 1193.
——Water-works construction offers 1,400-hp. load (B. J. George), 806.
——Wiring:
Boston Edison's, advertising, 77.
Home, standardization of (editorial comment), 551.
Ten years' activity in house,—effect of, *1264.
Unwired homes, advertising, *524.
Commission regulation and rulings, public service:
——Amortization of abandoned property (Illinois), 483.
——Bill and service charge, minimum (New Jersey), 585.
——Bonds (see also Securities):
Issues under blanket mortgage (Vermont), 971.
Must bear reasonable proportion to stock (Wisconsin), 768.
——Code requirement upheld, National Electrical (Pennsylvania), 971.
——Competition between power company and municipal plant (Wisconsin), 1022.
——Competition, protection against (New Jersey), 1277.
——Consolidation:
(Maine), 534.
Capital accounts, with proper limitation of (New York), 1175.
——"Contingencies," special reserve for (Illinois), 337.
——Contracts, power to change private (Oklahoma), 435.
——Costs for engineering and general supervision, ten per cent of construction (Illinois), 435.
——County commissioners cannot bar utilities from their districts (Maryland), 191.
——Delinquent customers, protection against (Wisconsin), 1228.
——Depreciation:
Allowance, nature of annual (Missouri), 1125.
Neglect to provide for (Maine), 871.
Reserve (North Dakota), 669.
——Discrimination (North Dakota), 585.
——Distribution line; promises and agreements made by construction company (Wisconsin), 435.
——Dividends paid when depreciation fund should have been set up (Wisconsin), 769.
——Dividends should be paid directly (California), 1228.
——Electrical energy consumers cannot be made to meet railway losses (Montana), 1022.
——Extensions:
Refunds to customers who finance (Wisconsin), 717.
——Extrastate control (Massachusetts), 1219.
——Foreign corporations, objection to operation of state utilities by (New York), 191.
——Franchises:
Conflicting (New York), 483.
Revocation of (New Jersey), 1175.
——Holding companies:
Commission desires power over stock issues of (New York), 1073.
Existing, superimposition of new, on (New York), 1073.
"Foreign," (New York), 1022.
Supplying commodity is subject to regulation (Montana), 1175.
——I. C. C. over utilities, bill to extend jurisdiction of, 1321.
——Inductive interference (Iowa), 922.
——Installations, utility's right to inspect (Pennsylvania), 289.
——Interstate traffic (Montana), 1175.
——Invasion of territory (Illinois), 141.
——Investment in hope of making it pay, company cannot be compelled to increase (Montana), 36.
——Melones power pact (California), 581.
——Merger company acquires rights of constituent companies (Pennsylvania), 769.

*Indicates illustrated articles

Commission regulation and rulings, public service (Cont.):
——Meter, utility not required to render service to two connected buildings through one meter (Illinois), 191.
——Municipal and private plants, co-ordination of (Utah), 1125.
——Municipal plant earnings (Wisconsin), 387.
——Municipal plants, authority over (Indiana), 1277.
——Municipal utility ordered to serve township where plant is located (Wisconsin), 90.
——Municipality allowed to purchase lighting plant without establishing financial strength (Pennsylvania), 717.
——National Association of Railroad and Utilities Commissioners convention, 812, 815, (editorial comments), 783, 835.
——"One-man utility" (Massachusetts), 1228.
——Pennsylvania's governor on, 281, 1117 (editorial comment), 301.
——Pinchot's view of state regulation, 281, 1117 editorial comment, 301.
——Protest, long-delayed (Massachusetts), 36.
——Rates:
Base value (Arizona), 289.
Compared, when they can be (Alabama), 238.
Decisions, a lesson from (editorial comment), 399.
Fair return (Massachusetts), 717.
Flat, superseded by demand charge on two bases (Massachusetts), 971.
Municipality authorized to raise and equalize (Wisconsin), 90.
Old, cannot be continued in new contract without investigation (Pennsylvania), 141.
Parent company not forced to take part in, case instituted by subsidiary (West Virginia), 819.
Reduction of, signature of petitions for (Indiana), 1329.
Regulated on reasonable ability of consumers to pay as well as on return to company (California), 191.
Rural electric service losses considered in, structure (Wisconsin), 191.
Service and, inseparably associated (Missouri), 141.
Standby electric (Nevada), 922.
Underground construction justifies, forcing (Massachusetts), 922.
Uniformity (Tennessee), 337.
——Resort company a public utility when is a? (Michigan), 1329.
——Retirement expense (Illinois), 387.
——Rural customers, What constitutes (Wisconsin), 669.
——Rural line, definition of "consumer" on (Wisconsin), 585.
——Service:
Abandonment of utility (North Dakota), 289.
Charge, graduated (Wisconsin), 36.
Unprofitable, (Wisconsin), 387.
Unprofitable discontinuance of (Montana), 1125.
——Securities (see also Bonds and Stocks):
Approval of new (Maine), 534.
Basis of issue of, to effect merger (New Jersey), 871.
Issues (Nebraska), 36.
——Steam heat, allocating charges for electricity and (Oregon), 922.
——Stock (see also Securities):
Approval of issue, revocation of franchise does not warrant rescinding (New Jersey), 1175.
Issue to build competing line disapproved (New Jersey), 534.
Refusal to permit, to be issued against going value (Nebraska), 819.
——Substations, location of (Illinois), 971.
——Transmission line interfering with telephone line, unauthorized (Missouri), 1073.
——Trees, destruction of shade (Wisconsin), 387.
——Unsafe private line (Pennsylvania), 717.
——Urban and rural customers, distinguishing between (Wisconsin), 717.
——Valuation:
(Rhode Island), 871.
(Utah), 1022.
Revaluation, denial of (Michigan), 819.
Water-power rights, of (Illinois), 337.
——Water rights, evaluating (California), 1277.
Commonwealth Edison Co. (See Illinois, Chicago).
Complaints, (see under Public relation).
Compressors, pressure regulator for electric air (F. Eckinger) D, 130.
Condensers, electric:
——Electrolytic (A. Soulier) D, 1166.
——Synchronous:
Fire extinguisher mounted on, *174.
Railway generator, drives (John Bankus), *802.
Value of, demonstrated, 1160.
Condensers, steam:
——Leakage test (D), 1216.
——Steam ejectors in, for high vacua (N. A. Lamb) D, 1011.
——Tubes, removing scale from (R. H. Forney), 121.
——Waters for, lake (A. G. Christie) D, 1164.
Conductors (see Cables):
Conduit:
——Submarine, line (G. H. McKelway), 752.
Connecticut:
——Bristol & Plainville Electric Company, Connecticut Light & Power to acquire, 964.
——Electric Service Company formed, 1322.
——Hartford Electric Light Co.:
"Customers' dividend," 232.
Mercury boilers, *607.
——Light & Power Company:
Bus structures of pipe framing, *786.
Devon plant to be enlarged, 1068.
Voltages for general supply of light and power, increased (J. E. King), *997.
——Trumbull, some plain talk from Governor (editorial comment), 735.
Conowingo (see under Maryland and Pennsylvania):
Construction (see also Statistics):
——Central-station, expenditures for 1925, p. 1048.
——News, 43, 97, 147, 197, 244, 295, 343, 393, 441, 489, 541, 591, 675, 723, 775, 825, 877, 928, 977, 1028, 1079, 1131, 1181, 1234, 1283, 1335.
Consumer relations, (see Public relations).
Control motor (see Motor control).
Converters:
——Motor, versus rotary (G. Wuthrich) D, 1115.
——Phase splitters, dimensioning of (B. Gerstman) D, 808.
Cooking, electric (see Commercial Activities and Ranges).
Copper, (see also Statistics):
——Resistance of, at high temperature (Paul Cloke), *224.
——Statistics, *153.
——Tacoma smelter and refinery (George J. Young) D, 26.
Corona:
——Investigations on an artificial line (Murray F. Gardner) D, 525.
——Rubber, measuring effects of corona on (F. L. Haushalter), *267.
——Unipolarity of (M. G. Evreinov.) D, 378.
Costs:
——Advertising, public utility, 23.
——Construction, Analyzing utility (P. O'Moore), *168.
——Diesel plants, operating (Frank H. Poehlman), 21.
——Equipment, influence of high pressures on, 1306.
——Estimates facilitated, accurate (R. A. Miller), *319.
——Line construction, keeping for (R. A. Miller), *73.
——Living versus cost of lighting, of *986.
——Operating and maintenance, of coal burning stations, *633.
——Power-plant operating (D), 1165.
——Range servicing and complaint, 323.
——Refrigerator service electric, 24.
——Service need accurate analysis (editorial comment), 987.
——Special apparatus, making (C. H. Roth), 39.
——Transmission line, in France, 1314.
——Water heating, electric, 275.
Cotton mills (see Mills).
Court decisions:
——Accident occurring during special operation (Nebraska), 36.
——Appeal to federal courts for relief, 1329.
——Assurances of safety of wiring given by workmen, company not bound by (Missouri), 141.
——Canal owning water-power properties (Wisconsin), 1022.
——Cities to condemn electric plants held permissive and not mandatory, statute authorizing (Iowa), 922.
——Commission engineers' estimates should not be reduced without justification (Ohio), 191.
——Commission, public utility cannot by special contracts avoid control of (Oklahoma), 1175.
——Commissions' powers (Alabama), 717, (California), 232, 1073, (Colorado), 1022, (Idaho), 483, (Maryland), 191, (Minnesota), 717, (Missouri), 1277, (Oklahoma), 585, (Rhode Island) 238, (Wisconsin), 1228, 1277.
——Commissioners:
Governor's right to dismiss (Pennsylvania), 1117.
Judgment of industrial (Iowa), 387.
——Company's responsibility for servant's act (Virginia), 1175.
——Condemnation for transmission line right-of-way (Wisconsin), 238.
Court decisions (Cont.):
——Customer's differences with utility (Alabama), 238.
——Dam:
Damages from freshets (West Virginia), 1125.
Erection subject to commission (Wisconsin), 1329.
Overflow from (Vermont), 769.
Power, held not a nuisance (North Carolina), 669.
——Damages caused by outsider's tampering with wires (Arkansas), 435.
——Danger from electricity held not obvious employment risk (Massachusetts), 585.
——Danger, violation of rule designed to prevent one (New Hampshire), 769.
——Dangerous amount of electricity can be determined only by circumstantial evidence, presence of (Arizona), 141.
——Death of workman, award for (Florida), 717.
——Deposits by customers (Indiana), 1277.
——Employee of one company working on premises of another (Georgia), 669.
——Engineers' estimates, what weight should be given to (Idaho), 534.
——Flood waters not to be deflected on another's property (Kansas), 1175.
——Franchise in which no duration period is set, law governing (Ohio), 1175.
——Fire, failure of power for pumping during (Wisconsin), 585.
——Going value (Idaho), 1125 (Missouri), 922, (New York), 871, 971.
——Inductive interference (California), 1228.
——Injuries:
Power lines, from (Idaho), 871.
Transformer controlled by customer, from (Virginia), 238.
——Insulator, injuries from falling (Missouri), 1277.
——Investment prudently made, unused (South Carolina), 534.
——Jefferson Barracks case (Missouri), 819.
——Liability for negligence not removed because damages are paid by another under compensation law (Georgia), 36.
——Maximum demand held unnecessary, notice of exercise of option to measure consumer's (Missouri), 141.
——Municipal power plant held not a departure from the general plan, reduction in capacity of engine for (Arkansas), 141.
——Narragansett-Attleboro case, 971.
——Negligence:
(Alabama), 238, (Arizona), 238, (Florida), 819, (Missouri), 922.
Contributory (California), 1125, (New York), 90, (North Carolina), 1277, (Pennsylvania), 971.
——Poles:
Joint use of (New Hampshire), 769.
Lying in roadway, accident from (Virginia), 1125.
——Power contract case, Lockport (New York), 1228.
——Profitable light and power service and unprofitable street railway held to "stand or fall together" (South Carolina), 90.
——Purchase of electric company's property, "good faith" (Missouri), 1277.
——Rates:
Company may promulgate, when commission fails to fix them (Michigan), 36.
Confiscatory, fixed by statute (New York), 1228.
Deductions from valuation must not affect, unfairly (Missouri), 717.
Experimental, Cannot be deemed unreasonable (Missouri), 717.
Fixed by commission is unfair rests on company, burden of proof (Oklahoma), 1175.
Fixing, police power of state and (Missouri), 289.
Franchise, fixed prior to creation of commission (Oklahoma), 871.
Increase of, named in contract (Tennessee), 1175.
Preferential, secured by contract (California), 1073.
Temporary, fixed by court not an infringement on jurisdiction of commission (Idaho), 1073.
Unlawful, commission's ordering a rate change is evidence that it found existing (Kansas), 769.
——Riparian rights (New York), 819.
——"Seasonal" occupation (Nebraska), 337.
——Seattle vs. Puget Sound Company, 971.
——Service failure, damages from (New York), 819.
——Service to populous district, extending (New York), 1228.
——Shock, death of lineman from ruptured artery ascribed to electric (Michigan), 90.
——Squier patent case, Supreme Court refuses review of, 863.
——Stockholders of water company holding contract with power company cannot sue later as individuals (Washington), 819.

*Indicates illustrated articles

Court decisions (Cont.):
——Telephone lineman may recover for negligent failure to insulate electric wires (Arkansas), 191.
——Trade association activities, 821.
——Transmission right-of-way contiguous to existing line (Alabama), 717.
——Valuation:
(Oklahoma), 90.
Commissions not to be limited to one rule or theory of (Idaho), 534.
Non-operative property excluded from (Idaho), 483.
——War-time aid to central-station company, claim on United States for, 1125.
——Wiring, evidence on hazards involved in defective (Texas), 1022.
——Workman declared to be in employ of power company since he took orders from it, outside (Oklahoma), 141.
Cranes:
——Cargo handling, electrically operated for, *952.
Credit (see Electrical Credit Association and under Manufacturing and markets).
Cuba:
——Electric Bond & Share takes over Havana company, 1321.
Customer ownership:
——Byllesby executive on (John J. O'Brien), *161.
——Lead us, whither will it (editorial comment), 602.
——Partners, should develop real, 128.
——Stock sales, May, *200, first half of 1925, p. *444, July, *726, August, 932, September, *1134, October, 1338.
Customer relations (see Public relations).

D

Dealer, electrical: the only way to make him prosper (editorial comment), 352.
Denver (see Colorado).
Diesel engines (see Engines).
Distribution of merchandise (see Manufacturing and markets).
Distribution system:
——Alternating current:
Secondary networks, evolution of (H. Richter) D, 278.
Three-phase, four-wire, low-voltage network (R. B. Hunter), *565.
——A. I. E. E.:
Papers on, *15.
Problems discussed at convention (editorial comment), 784.
——Australia, practices in (F. W. H. Wheadon), *221.
——Commonwealth Edison Company's 60-cycle (W. G. Kelley) D, 1165.
——Cost keepings for (R. A. Miller), *73.
——Costs, Analyzing utility construction (P. O'Moore), *168.
——Duquesne Light Company's 4,000-volt (Samuel Rosenbach) D, 129.
——Economics of (Howard P. Seelye), *107, (editorial comment), 105.
——Knowing one's, System, *272.
——Limelight, in the (editorial comment), 103.
——Line extension profits, forecasting (W. A. Fobbush), 453.
——Losses reduced by line survey (Eugene Vinet), 1158.
——Pacific Gas & Electric Company's, network (S. J. Lisberger) D, 78.
——Portland (Ore.) Electric Power Company's (L. M. Applegate and W. Brenton) D, 861.
——Pre-equipment with data as an aid to quick decisions (editorial comment), 105.
——Residential areas, to supply increasing load densities in (M. T. Crawford) D, 1011.
——Secondary racks stand up under storm conditions, 1108.
——Two-phase, five-wire (P. H. Chase), *63.
——Trees, trimming shade (editorial comment), 936.
——Voltages for general supply of light and power, increased (J. E. King), *997.
District of Columbia, Washington:
——Potomac Electric Power will cut rates, 1273.
Doherty, Henry Y. & Co., (see also Financial).
——Lamp sales, incandescent (Fred I. Smith), 1045.
Dredge "Clackamas," Diesel electric pipe-line (James H. Polhemus) D, 474.
Duke, James B., death of, *811, editorial comment, 783.
Dynamometers, direct-current (Scott Hancock) D, 758.
Dynamos (see Generators).

E

Edison, Thomas A., on the Aspirations of a public utility, 1017.
Edison medal awarded to Harris J. Ryan, *1219.
Education:
——Heating schools, industrial, 913.
——Industrial plant engineers, electrical training for, *75.
——Lighting, Nela school of (D), 327.
——University of Michigan's electrified hospital, 408.
——All-metal propaganda, N.E.L.A. opposes, 1278, editorial comment, 1241.
Electragists, International Association of:
——Convention, 282, 666, (editorial comment), 682.
——Trumbull, some plain talk from Governor (editorial comment), 735.
Electric Bond & Share Co., investigation of, 83, 281 (see also under Financial).
Electric Power Club:
——Business asset, as a (Alfred E. Waller), 873.
——Consolidation with Associated Manufacturers of Electrical Supplies, proposed, 1015.
——Editorial comments, 885.
——Meeting, fall, 764, 864.
Electrical Credit Association's Central Division meeting, 1018, 1120.
Electrical Supply Jobbers Assoc. (see also Jobbers under Manufacturing and Markets):
——Meeting, annual winter, 1066, editorial comment, 1091.
Electricians meet, International Association of Municipal, 380.
Electrification, railroad (see Railways).
Electrochemistry:
——American Electrochemical Society convention, 479, 711.
——Sodium nitrate by the arc process, making (H. K. Benson) D, 960.
Electrolysis:
——Water under high pressure, of (editorial comment), 500.
Electrolytic:
——Calcium arsenate (Stewart J. Lloyd and A. M. Kennedy) D, 279.
——Circuits containing semi-conductors, electrical properties of (O. R. Randall) D, 425.
——Hydrogen plant for France, 800.
——Impurities, change in concentration of (M. de Kay Thompson) D, 575.
——Iron, making pine, commercially (D), 862.
——Meter (K. Kessler and W. Krukowski) D, 861.
——Refining, new addition reagent for (D), 862.
Electron emission from oxide-coated filaments (Lewis R. Koller) D, 130.
Electron tubes, (see Radio, tubes).
Electrons, ions and (editorial comment), 734.
Electrophysics:
——Electrons between coaxial cylinders under the influence of current along the axis, the motion of (A. W. Hull) D, 181.
——Magnetron taking into account the variation of the mass of the electron with velocity, theory of the (Leigh Page) D, 279.
——Selenium, effect of light on the thermo-electric power of (R. M. Holmes) D, 181.
——Thermo-electric effect in single-crystal zinc wires (Ernest G. Linder) D, 1116.
Electroplating (see Plating).
Elevators:
——High-speed, developments (E. B. Thurston), *159.
Employee relations (see also Labor).
——Annuity, service, 704.
——Compensation, comments on (A. Manager), 21.
——Good public relations built on good (editorial comment), 55.
——Harmonious in electrical industry (editorial comment), 104.
——High plant economy, an urge to securing, *172.
——Housing hydro plant operators in New England, *33.
——Insurance fills definite need, group (W. H. Ude), 573.
——Library to employees, selling an industrial, *389.
——Lighting to the workers, selling industrial (editorial comment), 837.
——Power and labor (editorial comment), 783.
——Rate cases, telling employees about (editorial comment), 205.
Engineers (see also Engineering).
——Advertising for professional, service (George T. Seabury), 566.
——Power, can't do it all (editorial comment), 602.
——Services more in demand, 136.
Engineering:
——Advertising and (editorial comment), 303.
——Experience, capitalize upon (editorial comment), 253.
——Good, deserves good business management (editorial comment), 1141.
——Museum of, and industry, national (editorial comment), 203.
Engineering Foundation:
——Dam, experimental tests of arch, 1323.
——Policy, declaration of, 1325.
Engines:
——Diesel:
Economy of, over-all (C. B. Jahnke) D, 78.
Operating costs of, plants (Frank H. Poehlman), 21.
Hydro-electric power stations and (Alfred Buchi) D, 473, 574.
Peak-load periods, for (M. Gercke) D, 180.
Steam and, comparison between (F. Ohlmüller) D, 377.
——Steam:
Desuperheating steam for reciprocating (W. G. Shurgar), 272.
Testing, by the heat balance method (Eugene Ogur) D, 229.
England (see Great Britain and Manufacturing and markets, foreign).
Europe:
——Circuit breaker developments (C. W. Denny), *122.
——Generator, largest three-phase, 1150.
——Hydraulic machinery design (F. Johnstone-Taylor) D, 525.
——Hydro-electric activity (George Brockner) D, 707.
——Motor in, the compensated asynchronous (F. R. Kade), *120, correction, 465.
——Pulverized fuel in (C. H. S. Tupholme) D, 278.
Excavator, large electrically-operated (D), 1267.
Exciter practices in electric power stations (H. M. Rankin) D, 278.
Expenses (see Costs).
Exports (see Manufacturing and markets, Foreign).

F

Farm, electricity on the (see Rural electric service).
Federal Power Commission:
——Activities, 29, 135, 186, 233, 331, 428, 479, 581, 665, 709, 711, 764, 867, 912, 962, 966, 1017, 1120, 1170, 1273, 1322.
——Barge Canal diversion and, 29.
——Fixed-capital accounts, ruling on, 136.
——Merrill, possible successors to, 85.
——Muscle Shoals, Merrill on, 31.
——Report, annual 1065, editorial comment, 1089.
——Water resources, proposed survey of, 664.
Federated American Engineering Societies (see American Engineering Council).
Feed water (see under Boilers).
Financial and Corporate:
——Adirondack Power & Light Corporation's growth (Paul Willard Garrett), *209.
——Alabama Power Company's financial growth (Paul Willard Garrett), *201.
——Allis-Chalmers quarterly statement, 981.
——American Gas-United Gas Improvement merger, 83.
——American Power & Light Company buys Superior (Wis.) Water, Light & Power, 475.
——American States Securities Corporation formed, 1237.
——American Water Works & Electric Company subsidiaries to merge, 477.
——Associated Gas & Electric Co.:
Directors meet, 346.
Expands (Paul Willard Garrett), 445.
Penn Public System, to buy, 330.
——Bank investment, light and power securities legal, 247.
——Banks and utility securities, savings, 881.
——Barometer for financing (Colonel L. P. Ayres), *829.
——Bonds:
Called, 544, 828.
Maturities, 298.
Quotations, 49, 102, 152, 202, 250, 300, 348, 398, 446, 494, 546, 596, 678, 728, 780, 830, 883, 932, 982, 1034, 1084, 1136, 1186, 1238, 1288, 1340.
——Bristol & Plainville Electric Company, Connecticut Light & Power Company to acquire, 964.
——Buffalo, Niagara & Eastern Power Corporation, *247.
——Byllesby interests:
California - Oregon Power Company, acquire, 961.
St. Paul Gas Light Company, to buy, 961.
Wisconsin Public Service Corporation, purchase of, 134, 234, editorial comment, 203.
——California-Oregon Power Company, Byllesby acquires, 961.
——Capital issues, new, 101, 150, 200, 298, 346, 396, 544, 594, 678, 780, 828, 980, 1032, 1082, 1134, 1185, 1237, 1286, 1338
——Carlisle and Schoellkopf interests in New York consolidated, 917.

*Indicates illustrated articles

Financial and Corporate (Cont.):
——Carolina Power & Light:
National Power & Light acquires, 1017.
Unusual place (Paul Willard Garrett), *347.
——Central States Electric Corporation, 444.
——Central-station, total: June, 47, editorial comment, 1, July, 249, August, 493, September, 727, October, 981, November, 1185, editorial comment, 1139.
——Cities Service stock issue (Paul Willard Garrett), 1237.
——Columbia Gas & Electric earnings go up (Paul Willard Garrett), *1339.
——Commonwealth Power Corporation, *100.
——Connecticut Electric Service Company formed, 1322.
——Consolidated Gas Company of New York (Paul Willard Garrett), *1184.
——Consumers' Light & Power sold to Citizens' Light & Power Company, 712.
——Copley utilities merge, 1286.
——Customer ownership stock sales, May, *200, June, *444, July, *726, August, *932, September, *1134, October, *1338.
——Detroit Edison's improved set-up (Paul Willard Garrett), *1031.
——Dividends declared, 48, 101, 150, 200, 249, 298, 346, 396, 444, 494, 546, 595, 726, 780, 830, 882, 932, 982, 1034, 1082, 1135, 1237, 1286, 1339.
——Doherty (See Cities Service Co.).
——Dow, Alex, denounces speculation, 709.
——Eastern power companies, removed union of, 577.
——Electric Bond & Share Co.:
Investigation of, 83, 281.
Havana Electric Railway, Light & Power Company, takes over, 1321.
National Power & Light revamps set-up (Paul Willard Garrett), *1083.
——Electric Railway Securities Company becomes Utility Shares Corporation, 1082.
——Engineers' Public Service Company (Paul Willard Garrett), 100.
——Financial structures compared (H. A. Fountain), 493.
——Fitkin properties:
Eastern Shore Gas & Electric, buys, 710.
Exmore (Va.) Light & Power, buys, 1323.
Virginia Western Power Company, buy, 27.
——Foreign loans for electric power development (editorial comment), 1293.
——Foreign securities sold in United States, 346.
——Foshay Company gets two more Minnesota plants, 1324.
——General Gas & Electric recapitalizes (Paul Willard Garrett), *46.
——General Public Service Corporation organized, 1340.
——Georgia Railway & Power's set-up (Paul Willard Garrett), *1135.
——Germany:
A. E. G. Loan, 1238.
Electric Power Corporation of, *545.
Loan, 1134.
United Industrial Corporation loans, 1340, editorial comment, 1293.
——Havana (Cuba) Electric Utilities Company organized, 594.
——Haverhill and Newburyport (Mass.) companies combine, 577.
——Holding companies:
Combinations that confuse, 594.
Finance and speculation (editorial comment), 837.
Pardee praises, 964.
——Insull interests (see also Commonwealth Edison and Middle West Utilities):
Holding company for Southwest, 530.
Holding company, new (Paul Willard Garrett), *727.
New England holdings, consolidate, 677.
Ontario territory, enter north, 1014.
Samuel Insull's views on financing, 329, 382.
——International Paper Company stock split-up, 1031.
——International Power Securities corporation loan, 1286.
——Interstate Public Service to acquire new property, 150.
——Investment banker's viewpoints (Harold V. Bozell), *778.
——Investment bankers watch utility legislation, 1322.
——Iowa utilities consolidating, 233.
——Japanese loan floated, 29?.
——Key West Electric Company sold, 1238.
——Lehigh Power Securities is growing (Paul Willard Garrett), *931.
——Long-term financing, 778.
——Market situation demands caution, public utility (editorial comment), 351.
——Metropolitan Edison takes step ahead (Paul Willard Garrett), *248.
——Midland Utilities controls Indiana Service Corporation, 332.
——Mohak-Hudson Power merger, 828.
——Middle West Utilities Co.:
Central Maine Power Company, acquires, 185.
Central Power & Light, acquires, 82.
Manchester (N. H.) utility, seek, 27.
Southwestern Gas & Electric Company, buys, 282.
Financial and Corporate (Cont.):
——National Power & Light Co.:
Carolina Power & Light Company, acquires, 1017.
Set-up, revamps (Paul Willard Garrett), *1083.
——New England Power Company:
Growth (Paul Willard Garrett), *677.
New interests allied with, 761.
Reorganization plan, 1118.
——New England properties, more buying of, 916.
——North American Co.:
Mississippi River Power Company, buys control of, 763.
North American Edison's financing (Paul Willard Garrett), 828.
Western Power, takes over, 527, (Paul Willard Garrett), *595.
World's largest electric producer (Paul Willard Garrett), *980.
——Northern States Power Company's growth (Paul Willard Garrett), *1287.
——Penn Central, Albert Emanuel interests to buy, 333.
——Public utility securities and savings banks (editorial comment), 253.
——Puget Sound Power & Light's expansion (Paul Willard Garrett), *544.
——Reports:
Annual, 150.
Company, 48, 101, 150, 200, 248, 298, 346, 396, 444, 494, 546, 596, 677, 728, 780, 830, 880, 982, 1034, 1082, 1134, 1185, 1287, 1338.
——Revenue:
Gross, *48, *248, *492, *728, *981, *1186, *1338.
Increasing, per dollar invested (John F. Gilchrist), *61.
——St. Paul Gas Light Company, Byllesby interests to buy, 961.
——Salem (N. H.) Electric Company sold, 1272.
——Saving-bank investment field, widening (E. J. Beckett), 1032.
——Security, eleven tests of a good utility, 957, comment (L. R. Nash), 1107.
——Southeastern's new plan (Paul Willard Garrett), *397.
——Southwestern Gas & Electric, Middle West Utilities Company buys, 282.
——Standard Power & Light stock to be exchanged, 46.
——Stocks:
Inflation of, H. A. Wagner deprecates, 426.
Market quotations and public utility rates (editorial comment), 203.
Quotations, 49, 102, 152, 202, 250, 300, 348, 398, 446, 494, 546, 597, 678, 728, 780, 830, 882, 932, 982, 1034, 1084, 1136, 1186, 1238, 1288, 1340.
Speculation in utility, Sloan deplores, 1065.
——Stone & Webster absorbs Texas property, 530.
——Superior (Wis.) Water, Light & Power, American Power & Light buys, 475.
——Tax-exempt securities, billions invested in (editorial comment), 155.
——Toledo utility has had a good growth (Paul Willard Garrett), *151.
——Union Electric Light & Power takes over Mississippi River Power, 1167.
——United Gas Improvement-American Gas Merger, 83.
——United Light & Power takes over five Ohio plants, 332.
——Utilities Power & Light Corporation (Paul Willard Garrett), *880.
——Weekly reports, 46, 100, 150, 200, 247, 298, 346, 396, 444, 492, 544, 594, 677, 726, 778, 828, 880, 931, 980, 1031, 1082, 1134, 1184, 1237, 1286, 1338.
——West Penn merger approved, 1339.
——Western Power Company, North American takes over, 527 (Paul Willard Garrett), *595.
——Wisconsin Public Service Corporation's sale to Byllesby interests, 134, 234, editorial comment, 203.
Finland, hydro-electric development (Hugo Malmi) D, 473, 699.
Fire:
——Extinguisher mounted on synchronous condenser, *174.
——Fighters, first aid to, *1215.
Fixtures lighting (see under Lighting).
Flatirons, caloric and electric tests on (K. Backhaus) D, 378.
Foodlighting (see Lighting).
Florida:
——Electrical development, *713.
——Floods do little harm to central-station plants, 1170.
——Lighting a development, *736.
——Power & Light Company's Fort Lauderdale plant, 1220.
France:
——Alsace-Lorraine, post-war electrical development, 119.
——Business side of electrical development, 110.
——Comines and Gennevilliers superpower stations (John B. C. Kershaw) D, 808.
——Eiffel Tower carries electrical advertising, *582.
——Electrical growth in, 796.
——Electrical delegates visit Hell Gate (New York) station, *814.
——Electrical terms in the French language, 555.
France (Cont.):
——Engineers' tour of United States, 666, 765, *814, 1018.
——Fountains, luminous (A. Curchod) D, 1011.
——Gennevilliers station (John B. C. Kershaw) D, 808, (E. Roth) D, 758, 1104.
——High-tension conference, international, 451.
——Hydrogen plant, electrolytic, 800.
——Import and export of electrical energy, regulation of (A. Bouchayer) D, 758.
——Industrial electrification (Hugh Quigley) D, 327.
——Paris:
American electric home for, 765.
Exposition lighting system, 62.
——Pont-de-Claix hydro-electric plant (J. Reyual) D, 278.
——Power Exposition, 282.
——Railway electrification (Sir Philip Dawson and S. Parker Smith) D, 1217.
——Substation installation, 220-kv. (P. Quoirez) D, 1319.
——Transmission in, *82.
——Transmission line costs, 1314.
Frequency changes; joint use of (G. L. Furr), *1049.
Fuel:
——Ashes and soot deposits, heat conductivity of (G. Borelius and Artur Erikson) D, 526.
——Milwaukee Electric Railway & Light Company to use distillation of coal, 329.
——Pulverized or powdered:
Boiler furnaces for (A. G. Christie) D, 473.
Cleveland experience, 72.
European plants, in (C. H. S. Tupholme) D, 278.
Furnace radiation in the (W. J. Wohlenberg and D. G. Morrow) D, 424.
Plants, economic comparison of stoker and (H. S. Colby), *1301, editorial comment, 1294.
——Wood refuse, standard unit of (D), 229.
Furnaces (see Boiler room).
Furnaces, electric:
——Carbonizing, for treating piston pins, *1163.
——Carbonizing saves $115 per day, electric (H. J. Hall), *1317.
——Converter, replaces (F. E. Hinners), *274.
——Duplex, operation in steel company, *854.
——Electrodes, new process of calking, 1158.
——Heat-treating, applications (E. A. Hurme) D, 708.
——High-frequency induction, plant for the manufacture of special alloys (P. H. Brace) D, 911.
——Induction, in large brass mill, *801.
——Iron oxide for use as a catalyst, preparation of fused (A. T. Larson and C. N. Richardson) D, 960.
——Melting (J. A. Seede) D, 708.
——Metallurgical purposes, for (V. Englehardt) D, 862.
——Oil-fired furnace to electric heating, converting an (W. J. Walsh), *1110.
——Quartz, electric melting of (M. Hellberger) D, 279.
——Steel production, raise, 370.
Fuses:
——Accessible service, experience with (P. H. Bartlett), *747.
——Switch, preliminary tests on new rechargeable, *1004.
——Wrong use of, one way to reduce trouble from (W. E. Nance), 465.

G

Galvanizing, new process, *121.
Galvanometer (see Meters).
General Electric Co.:
——Business in 1926, Europe exports better, 1126.
——Investigation of, 83, 281.
——Operating at 75 per cent capacity, 93.
——Vacuum-tube patent, gets basic, 866.
Generating stations, steam, (see also Hydro-electric plants).
——A.I.E.E. power generation committee's report, *5, editorial comment, 1, comment (B. G. Jamieson), 220.
——Australia: Adelaide Electric Supply Company's, Osborne, (D), 758, (F. W. H. Wheadon), *1097.
——Brooklyn Edison Company's Hudson Avenue (W. C. Holmes), *628.
——Caloric power plants, synthetic oil and (Zur Nedden) D, 808.
——Calumet Gas & Electric Company's Michigan City, 1117.
——Colorado Public Service Company's Valmont (R. R. Thorne) D, 1165.
——Columbia Power Company's Miami Fort, *1270, editorial comment, 1241.
——Columbus (Ohio) Railway, Power & Light Company's new, 1119.
——Commonwealth Edison Co.:
Crawford Avenue (W. L. Abbott), *113.
Crawford Avenue, unit No. 4, p. 1018.
——Connecticut Light & Power Company's Devon, to be enlarged, 1068.
——Costs, operating (D), 1165.
——Design:
Analysis of (C. F. Hirshfeld), *609.
Balance in, setting a better (editorial comment), 204.

*Indicates illustrated articles

Generating stations (Cont.):
Economy, for (James A. Powell) D, 377.
Independent, how for are they justified? (editorial comment), 255.
Practice and, latest (D), 1165.
Ratios in (John G. Fairfield) D, 180.
What is ahead in (B. N. Broido), *623.
——Detroit's new city, 1068.
——Detroit Edison's Trenton Channel (C. F. Hirschfield) D, 424.
——Florida Power & Light Company's Fort Lauderdale, 1220.
——French superpower, Comines and Gennevilliers (John B. C. Kershaw) D, 808, 1104.
——Future of (E. Wikander) D, 1216.
——Germany, design in (Dr. G. Klingenberg), *652.
——Great Britain: Nottingham, 1311.
——Great Britain, Ribble, at Preston, Lancashire, 282.
——Hydro-electric stations and, comparative economies of (editorial comment), 935.
——Indiana Electric Corporation's Wabash River, *838.
——Iowa, Davenport, near (D), 129.
——Iowa Power & Light Company's Des Moines, *284.
——Kansas Gas & Electric Company's Neosho (D), 1319.
——Loads, (V. L. Hollister), *320.
——Louisiana Power & Light Company's Sterlington, 1067.
——Motors, relay protection of (Ralph Kelly) D, 910.
——Muscle Shoals, 379.
——New York Edison's 720,000-hp., construction methods on (Frank W. Skinner) D, 1115.
——Ohio Edison Company's new, 427.
——Ohio Power Company's Philo (M. L. Sindeband and P. Sporn), *355, *403.
——Oklahoma Gas & Electric Company's Horseshoe Lake, 1271.
——Oklahoma Power Company's Tulsa (James F. Brown), *839.
——Operating performance of (Vern E. Alden), *633.
——Osborne, Adelaide, Australia (D), 758.
——Parallel operation of hydro and (F. A. Allner) D, 707.
——Pennsylvania Water & Power Company's Holtwood, 183.
——Small, justifiable privately-owned (A. B. Mallinson) D, 910.
——Sioux City Gas & Electric Company's Big Sioux (K. M. Irwin), *684.
——Southern California Edison Company's Long Beach, 814.
——Southern Power Company's Yadkin, 1117.
——Steam and Diesel, Comparison between (F. Oal Müller) D, 377.
——Tenney companies' new at Salem, Mass., 32.
——Wisconsin Public Service Corporation's Green Bay, 1117.
Generation:
——A.I.E.E., committee's report, *5, (editorial comment) 1, comment (B. G. Jamieson), 220.
——Economy warrants increased investment, increased (C. W. De Forest), *605.
——Engineering, record economies in power-station (editorial comment), 550.
——Future of, cannot be foretold (editorial comment), 601.
——Geyers offer power possibilities, *963.
——Power-station efficiency with output, variation of (R. H. Parsons) D, 473.
——Stability and overload capacity of power systems (August Berggren) D, 1115.
——Subterranean heat possibilities (editorial comment), 1038.
——System operation, economic (E. C. M. Stahl), *165.
——United States leads in (editorial comment), 601.
——Wind-power plants (K. Lubowsky) D, 326.
Generators:
——Alternating-current machines, synchronizing (John Auchincloss), *905.
——Asynchronous:
Plant (V. Genkin) D, 229.
Self-excited (W. Weiler) D, 525.
——Conductors, electric field of eddy-free (L. Fleischmann) D, 78.
——Frequencies for vibrating screens, obtaining odd, 519.
——Loss of, raising power factor covers, 1211.
——Low-voltage, protecting (Julius Reutler), *953.
——Motored to find phase rotation, 273.
——Rating, kva. versus kw. as basis for (editorial comment), 203.
——Short-circuit investigations on (H. Rikli) D, 129.
——Three-phase, Europe's largest, 1150.
——Windage loss in air, hydrogen, and carbon dioxide (Chester W. Rice) D, 279.
——Windmills, high-speed (K. Bilau) D, 959.
Geological Survey (see United States Government).
Georgia:
——Augusta-Aiken Railway & Electric pushing new construction, 710.
Georgia (Cont.):
——Columbus Electric & Power Company's Bartlett's Ferry plant, 476.
——Drought, 379, 529, 580, 864.
——East, Power Company's new transmission lines, 814.
——Legislation, public utility, 478.
——Merger of three companies, 427.
——Railway & Power Co.:
Financial set-up (Paul Willard Garrett), *1135.
Line interruptions and causes, *1210.
Power, short of 379, 529, 580, 864.
110-kv. line in North Georgia, 1170.
Yonah hydro-electric plant, 963.
——Southern Power Company's expansion, 916.
Germany (see also Manufacturing and Markets, Foreign):
——Berlin's consumption of electricity, 690.
——Electric Power Corporation of, *545.
——Radio aërials, regulations for outdoor (G. W. O. Howe) D, 378.
——Station design in (Dr. G. Klingenberg), *652.
——Substations, automatic (Joseph Roubicek), *801.
——Trucks in, electric (H. S. Meyer) D, *809.
——Zschornewitz power station's output 1055, comment (Robert L. Weaver), 1208.
——Zweribach hydro-electric station (K. Kobler) D, 1266.
Geysrs offer power possibilities, *963.
Good will (see Public relations).
Government ownership (see Ownership).
Great Britain (see also Manufacturing and markets foreign):
——British Empire Exhibition, scientific exhibits at (D), 1011.
——Electricity supply in (D), 707.
——Nottingham electric station, new, 1311.
——Power development, electrical, 517.
——Power factor needs improvement (H. L. Cape), 699.
——Ribble power station at Preston, Lancashire, 282.
——Rural electric service (D), 526, 1063, 1252.
——World market for electrical goods (Hugh Quigley) D, 26.
——World Power Conference, 379, 475.
Grounding neutral:
——(F. Cornu) D, 326.
——(Edgar D. Sibley) D, 474.
——Transformers with siren in the grounding circuit, three-phase (Fritz Jacobsson) D, 525.
Grounds:
——Alternating-current conductor, the ground as an (Otto Mayr) D, 910.
——Indicator (W. Gaarz and J. Sorge) D, 1115.

H

Handling materials:
——Cargo, electrically-operated cranes for, *952.
——Practice in modern plants (Matthew W. Potts) D, 526.
——Refuse, apparatus for, *468.
Hartford (see under Connecticut).
Hardware Association, National (editorial comment), 836.
Hawaii's water power resources, 408.
Heating, electric:
——Cafeteria has 125-kw. cooking load, *177.
——Industrial:
Baking, eliminating "cloudy finish" by electric (F. Arnold), 172.
Battery compound, used for (F. W. McGraw), 468.
Brushes, producing high-grade (S. L. Lang), *318.
Car wheel tires (A. E. Müller) D, 424.
Census to include questions on, 964.
Chemical industries, in the (Robert M. Keeney) D, 1012.
Combination gas and electric utilities, in (John G. Learned), 1001.
Equipment, why not exhibit more (editorial comment), 681.
Heat-treating piston pins, *1163.
Limiting factors in, study the (editorial comment), 1090.
Review of (C. P. Yoder), 559.
Schools, 913.
Steam, replaces (L. V. Curran), 71.
Survey of possibilities (C. P. Yoder), 503.
Tools, electric hot-plate used for tempering, *1005.
Trade secret, is it a? (editorial comment), 399.
——Ingots, of (Ralph A. Butler) D, 708.
——Materials of construction for very high temperatures (D), 708.
——Steel Works, in the (Ford Bates), *417.
——Temperature regulation with electric tubes (W. Taeger) D, 181.
——Water, energy consumption and cost of electric, 275.
Heat-treating (see Furnaces, electric).
Highway lighting (see Lighting street and highway).
Hoists:
——Car, electrically-driven (P. Hoepffner) D, 130.
Hoists (Cont.):
——Mine, modern (H. Winter) D, 1216.
——Rubber rolls, for lifting, *752.
Holding companies (see under Financial and Corporate).
Home electrical, Denver's third, *23.
Hospital, University of Michigan's electrified, 408.
Hotels (see under Commercial activities).
Hurley, Edward N., prize, 31, editorial comment, 353.
Hydro-electric developments (see also Hydro-electric plants):
——Alabama Power Co.
Cherokee Bluffs, 85, 580.
Lock 18 (F. G. Switzer), *795.
——Austria, 558.
——Black Canyon Dam automatic spillway gates (Julian Hinds) D, 129.
——Brazos River, 1120.
——Bulgaria, 1047.
——California, proposed, 476.
——Canada:
Carillon project, 430.
Ile Maligne, Quebec, 15.
Maritime province, in, 965.
New Brunswick, Grand Falls of 88. John River, 965.
Ontario, to produce 400,000-hp., 133.
Saguenay River, *256, *1015.
Saguenay site, Duke-Davis interests acquire 800,000-hp., 183.
Stave Falls, British Columbia, 431, (D), 861.
——Colorado River, 426, 428, 475, 581, 712, 865, 912, 962, 1119, 1222, 1271, 1321.
——Conowingo, 28, 133, 184, 530, 666, 762, 863, 966, 1014, 1219, 1323 (editorial comment), 603.
——Contoocook River (N. H.), 665.
——Cowlitz River, Washington, 330, 1273.
——Europe (George Brockner) D, 707.
——Feather River Power Company's Bucks Creek, 1325.
——Finland (Hugo Malmi) D, 473, 699.
——Helan River, Washington, 479, 964, *1170.
——Hetch Hetchy (D), 180, (M. M. O'Shaughnessy), *206.
——Irish Free State (D), 230.
——Italy, 800.
——Maryland: Youghiogheny Hydro-Electric Corporation's Deep Creek, *1040.
——Mexico, 664.
——Mississippi, 478.
——Muscle Shoals, *15, 27, 31, 81, 135, (Samuel S. Wyer) D, 180, 330, 379, 426, 476, 479, 528, 580, 666, 709, (M. C. Tyler), *739, (editorial comment), 733, comment (Barry Dibble), 1157, 761, 863, *914, 961, 1014, 1065, 1117, 1168, 1220, 1222, 1269, 1321, 1323.
——New Zealand, *888.
——North Carolina, 332.
——Ohio, Louisville Hydro-Electric Company's Falls of the, 581.
——St. Lawrence River, 30, 578.
——San Francisco's Hetch Hetchy (D), 180, (M. M. O'Shaugnessy), *206.
——Seattle's Skagit River, proposed, 1171.
——Skagit River, 186.
——Southern California Edison's Shaver Lake, 281.
——Tennessee, 966, 1269.
——Victoria Falls, Africa (E. F. Rendell) D, 1319.
——Virginian, 332.
——Washington: Cowlitz River, 330, 1273.
——Washington Water Power Company's Chelan River, 479, 964, *1170.
——Wisconsin, Flambeau reservoir, 1271.
Hydro-electric plants (see also Hydro-electric developments and Water Power).
——Automatic:
Bibliography (D), 229.
Control and indication, supervisory, 857.
Michigan Gas & Electric Company's Three Rivers, *373.
——British Columbia Electric Railway Company's Bridge River, 765.
Stave Falls, 431, (D), 861.
——California-Oregon Power Company's Copco No. 2, p. 85, (P. O. Crawford), *889.
——Canada Power Company's new, Southern, 233.
——Columbus (Georgia) Electric & Power Company's Bartlett's Ferry, 476.
——Control equipment for design of (K. E. Nylander) D, 473.
——Diesel engines and (Alfred Buchi) D, 473, 574.
——Feather River Power Company's, 28, 761.
——France, Pont-de-Claix (J. Reyval) D, 278.
——Georgia Railway & Power Company's Yonah 963.
——Germany, Zweribach (K. Kobler) D, 1266.
——Ice, prevention of damage from anchor (A. P. Broadhead), 1108.
——Jugoslavia, Faal (W. Grob) D, 758.
——Kentucky Hydro-Electric Company's Dix River, 580, (F. A. Dale), *939.
——Louisville Hydro-Electric Company's 100,000-hp., 133.
——Low-lead, for mid-west river (E. L. Chandler) D, 25.
——Mechanical features affecting reliable and economical operation of (E. A. Dow), D, 1011.

*Indicates illustrated articles

Hydro-electric plants (Cont.):
——Missouri Hydro-Electric Company's Ozark, 917.
——New England Power Company's Sherman Bridge, 284.
——Norway, Morkfoss-Solbergsfoss (Georg Brochmann) D, 377.
——Pacific Gas & Electric Co.
(J. P. Jollyman) D, 129.
Pet River No. 3, *185, *233, (E. A. Crellin), *450, *455, (editorial comment), 448.
——Parallel operation of, and steam plants (F. A. Allner) D, 707.
——Puget Sound Power & Light Company's Baker River, 477, 1068.
——Rock River, Dixon, Illinois (D), 326.
——Safety in, 381, 763.
——San Francisco's Moccasin, 81, 231, 381, (editorial comment), 205.
——San Joaquin Light & Power Corporation's (Balch), 475.
——Small privately-owned, justifiable (A. B. Mallinson) D, 910.
——Steam reserve plants, necessity for (editorial comment), 733.
——Vienna (J. Schlögl) D, 377.
——Washington plans for more, in Western, 1273.
——Washington Water Power Company's, buys Nine-Mile, 577.
——White River (Arkansas) Power Company asks permit, 761.
Hydrogen as a cooling medium for electrical machinery (Knowlton, Rice and Freiburg House) D, 377.

I

Ice (see also Refrigerators):
——Manufactured — an opportunity (A. J. Authenreith), *797, comment (Harrison D. Panton), 950.
——Plant drive, unbiased comparison of (ice machine manufacturer), 264, comment (Power Salesman), *902.
——Utilities and the, business (A. J. Authenreith), *844, editorial comment, 836.
Idaho:
——Black Canyon Dam automatic spillway gates (Julian Hinds) D, 129.
——Electric power in, *1194.
Illinois:
——Chicago:
Electric association formed, 916.
Middle Western power conference, 917.
Street signal, electric through—, *1054.
Utilities plan for 4,500,000 by 1950, 136.
——Chicago: Commonwealth Edison Co.
Crawford Avenue station (W. L. Abbott), *113, 1018.
Distribution system of, 60-cycle (W. G. Kelley) D, 1165.
Hotels, selling power to, *990, editorial comment, 989.
Illinois Central contract, 382.
Insull (see also Insull interests).
Insull on utility financing, 329, 382.
Lighting residential sections (John T. Miller), *1309.
Middle West power conference, 1324.
Union station serves, 383.
——Electricians, bill for licensing master, 171.
——Insull system expands in Great Lakes territory, *429.
——Permit law, terminable, 1120.
——State Power Conference, 1271.
Illuminating Engineering Society:
——Convention, annual, 431, 663.
——Nineteen years of (editorial comment), 682.
——Progress, report of committee on (D), 808.
Illumination (see Lamps and Lighting).
Incorporations, new, 147, 197, 343, 393.
Indiana:
——Calumet Gas & Electric's Michigan City plant, 1117.
——Electric Corporation's Wabash River station, *838.
——Electric Light Association convention, 582, 665.
——Insull system expands in Great Lakes territory, *429.
——Interstate Public Service Co.
Coal-handling equipment, *518.
Expansion in Vincennes district, 765.
——Service Corporation controlled by Midland Utilities, 332.
Inductive co-ordination:
——Problem in, a new (editorial comment), 1090.
Inspection and maintenance:
——Maintenance department, trouble crew and (A. B. Wollaber), 1207.
——Relay, practice (W. D. Wilkinson), *700.
Inspectors, Western Association of Electrical, annual meeting, 1324.
Instruments (see also Meters):
——Alternating-current test, accuracy of (S. C. Hoare) D, 861.
——Asymmeter, the (C. Schmittutz) D, 279.
——Detector for electric disturbances (F. Rutgers) D, 574.
Instruments (Cont.):
——Energized circuits, indication of (W. J. Ducey), *369.
——Firedamp indicators (D), 707.
——Gages and filters, electrically operated (Harry N. Jenks) D, 574.
——Ground indicator (W. Gaarz and J. Sorge) D, 1115.
——Heavisidion, the instant (Vladimir Karapetoff) D, 1062.
——Klyndonograph and its application to surge investigation (J. H. Cox and J. W. Legg) D, 1115.
——Measuring, new (S. Held) D, 1165.
——Oscillographs:
Cathode-ray (A. B. Wood) D, 1266.
Cathode rays for high-frequency (Harald Norinder) D, 910.
Electromagnetic, new (R. Dubois) D, 279.
High-sensitivity, a (editorial comment), 303.
——Phase, determining the sequence of (John Auchinloss), *420.
——Southern California:
Edison's electrical standardizing laboratory (W. R. Frampton), *411.
——Test board (Colborn E. Blaisdell), *856.
——Transients, for, *17.
Insulation (see also Insulators):
——Behavior, progress in the theory of (editorial comment), 734.
——Cable, new material for (H. W. L. Brückman) D, 1319.
——Cables, for submarine, 1150.
——Dielectric absorption in fibrous (R. E. Marbury and E. R. Le Ghait) D, 1266.
——Dielectric loss measurements on commercial (C. Dannatt) D, 861.
——Fibrous, dielectric—Strength-thickness relation in (F. M. Clark and V. M. Montsinger) D, 129.
——Mica and micanites (D. V. Onslow) D, 911.
——Research (editorial comment), 53.
——Resins, impregnating windings with synthetic, 1056.
——Rubber, measuring effects of corona on rubber (E. L. Haushalter), *267.
Insulators (see also Insulation):
——Defective, locating (George A. Iler), *257.
——Flash-over on (E. Marx) D, 229.
——High-voltage, development (K. A. Hawley), *360.
——Montana 66-kv. line uses original, *1007.
——Porcelain:
Loss-angle and capacity of (K. Draeger) D, 25.
Manufacturing and operation of (J. C. Holst) D, 1166.
Porosity tests on (R. Pfeiffer) D, 377.
——Research, high-voltage (editorial comment), 255.
——String used for phasing out circuits, *518.
——Washing dirty, with fine water spray (F. W. H. Wheadon), 273.
Insull, Samuel (see Insull interests, Commonwealth Edison Company, Financial and Illinois).
Insull interests:
——Central Maine Power Company, acquire, 185.
——Chicago Surburban Power & Light Company, seek to buy, 1273.
——Contoocook River developments, 665.
——Holding company for Southwest, 530.
——Holding company, new (Paul Willard Garrett), *727.
——Insull, Samuel, views on utility financing, 329, 382.
——Interconnections, further, 915.
——Lake territory, system expands in, *429.
——Manchester (N. H.) utility, negotiations with, 27.
——Ontario territory, enter North, 1014.
——Southwestern Gas & Electric Company, buys, 282.
Interconnection (see under Transmission).
International Association of Municipal Electricians meet, 380.
Investment Bankers' Association of America watch utility legislation, 1322.
Ions and electrons (editorial comment), 734.
Iowa:
——Davenport, new station near (D), 129.
——Mergers of utilities, 233.
——Power & Light Company's Des Moines station, *284.
——Sioux City Gas & Electric Company's Big Sioux station (K. M. Irwin), *684.
Irish Free State electrification (D), 230.
Iron (see also Furnaces, electric):
——Cast, magnetic and electrical properties of (J. H. Partridge) D, 1116.
——Losses at high frequency (G. W. O. Howe) D, 129.
——Losses in, under action of superposed a.c. and d.c. excitations (O. E. Charlton and J. E. Jackson) D, 1217.
——Making pure, commercially (D), 862.
Italy:
——Hydro-electric plans in, new, 800.
——Straits of Messina, proposed 130-kv. transmission lines across, *1258.
——Substation, state railways rectifier, 906.
——Superpower in (D), 25.

J

Japan:
——Electrical development, 232.
——Railroads, electrifying state (H. C. Hickock) D, 862.
——Superpower (Minoru Fukuda) D, 574.
Jobbers (see also Electrical Supply Jobbers' Association and Manufacturing and Markets):
——Power companies, future position and relation with (R. F. Pack), *1151.
Jugoslavia:
——Faal hydro station and Tuffer substation (W. Grob) D, 758.
——Water power in, 171.

K

Kansas:
——City (see under Missouri).
——Gas & Electric Company's Neosho plant (D), 1319.
——Public Service Association becomes Kansas section, N. E. L. A., 866, 917.
Kennelly-Heaviside layer, the (editorial comment), 988.
Kentucky:
——Hydro-Electric Company's Dix River plant, 580, (F. A. Dale), *939.
——Louisville Hydro-Electric Company's Ohio Falls development, 581.
Kilowatt or kilovolt-amphere? (William E. Keily), 368.

L

Labor (see also Employee relations):
——Coal miners strike, anthracite (editorial comment), 301.
Lamps (see also Lighting).
——Business, residence lighting as a factor in the large (editorial comment), 500.
——Carbon arc, production of fluorescence and phosphorescence by radiations from (W. S. Andrews) D, 759.
——Doherty subsidiary companies,' sales of incandescent, (Fred I. Smith), 1045.
——Mine, electric (M. Mathivet) D, 1013.
——Quartz, for analysis (L. J. Busse) D, 708.
——Tungsten wires, chemical reduction of the diameter of (W. Samter) D, 960.
——Wattage in the home, more (M. Luckiesh), *1105, editorial comment, 1091.
Laundry electrification, modern (Ford Bates), *226.
Leagues, electrical:
——Lamp Co-operation V, p. 383, 529, 579, editorial comment, 549.
——Editorial comment, 449, 549.
——Rost's, O. Fred, view of local work, 670.
Legal decision (see Court decision).
Lighting (see also Lighting, industrial, etc.):
——Bridge over Susquehanna at Clark's Ferry, Pa., *1121.
——Central-station, department (editorial comment), 1192.
——Christmas tree, Coolidge will again light, 813.
——Daylight:
Prediction of, from vertical windows (H. H. Higbie) D, 78.
Recording by Edison Electric Illuminating Company of Boston (H. J. Baker) D, 79.
Recording by the N. Y. Edison Co. (Walter R. Boyd) D, 79.
——Exhibits, organized (Ernest J. Teberg), *423.
——Eye fatigue and its relation to light and work (Percy W. Cobb and Frank K. Moss) D, 808.
——Fixtures, good business in (M. Luckiesh), *995, editorial comment, 989.
——Flood lighting:
Montgomery, Ward & Company's building (R. D. Myers), *470.
Niagara Falls, *106.
Philadelphia company's Pittsburgh building, *480.
Texas capitol's dome, *432.
Towers, transmission (Ernest J. Teberg), *1164.
Whaling ships, *766.
——Fountains in France, luminous (A. Curchoo) D, 1011.
——France, at Paris exposition, 62.
——Holiday, spirit all the year round (editorial comment), 1037.
——Home:
Better, campaign report, 127.
Billion dollar business available, a (M. Luckiesh), *737, editorial comment, 733.
Brackets, placing (G. W. Weston), 21.
Brackets, placing (D. W. Blakeslee), 171.
Evolution in, *572.
Lamp business, as a factor in the large (editorial comment), 500.

*Indicates illustrated articles

Lighting (Cont):
Lamps as load builders, portable (M. Luckiesh), *1251.
Load, increasing the, 892, editorial comment, 886.
Proper, will bring enormous business (editorial comment), 3.
Standardization of (editorial comment), 551.
Wattage in home lights, more (M. Luckiesh), *1105, editorial comment, 1091.
Watts per square foot in (editorial comment), 352.
——Illumination design data for industrial and commercial interiors (D), 378.
——Light production efficiency low but electric lighting is inexpensive (editorial comment), 204.
——Load factor, better lighting tends to improve (editorial comment), 105.
——Long-Bell Lumber Company's plant, *135.
——Niagara Frontier League's exhibit, 476.
——Nomenclature and photometric standards, illuminating engineering (D), 708.
——Philadelphia, large illuminated Liberty Bell for, *967.
——Photo-electric cell, records of daylight by the (James E. Ives) D, 26.
——Progress in, year's (D), 808, 1115.
——Projection (Frank Benford) D, 327.
——Railroad station, of (B. C. Reber), *1009.
——Residence (see Home).
——San Francisco's jubilee, 426, *667.
——School of, Nela (D), 327.
——Searchlights, towers for carrying, *225.
——Service department (D. J. Finn), *943.
——"Shaded light," a milestone in the progress of (editorial comment), 1294.
——Solar radiation intensity, and their relation to daylight intensity, records of total (Herbert H. Kimball) D, 130.
——Spectral energy distribution by Planck's formula, facilitating the computation of (D), 910.
——Sports, for outdoor (O. F. Haas and H. M. Sharp) D, 1266.
——Year's progress in (D), 808, 1115.
Lighting fixtures (see under Lighting).
Lighting, industrial:
——Boston campaign, *158.
——Campaign, N. E. L. A., 285, 381.
——Good, and the reduction of waste in industry (editorial comment), 54.
——Illumination design data for industrial and commercial interiors (D), 378.
——N.E.L.A. prizes, 1223.
——N. E. L. A. prospectus issued, 285.
——Philadelphia, in (M. C. Huse), *1153.
——Power-house, unusual phases of (A. F. Loewe) D, 129.
——Silk mill, *324.
——Ultraviolet radiations (editorial comment), 887.
——Workers, selling it to the (editorial comment), 837.
Lighting, street and highway:
——Alabama, business active in, 1318.
——American Legion helps finance, 23.
——Buffalo abandons Gas, 329.
——Chicago's residential district (John T. Miller), *1309.
——Control for subway installations (O. W. Holden), *1056.
——Florida development, *736.
——Good, essentials of (L. B. W. Jolley) D, 474.
——Highway, advantages of (F. M. Reast) D, 1165.
——Hybrid systems questionable, 163.
——Millions spent yearly improving over two, 771.
——Modern, and the traveler (ditorial comment), 400.
——N. E. L. A. recommendations, 176.
——Portland (Ore.), *1327.
——St. Louis (Mo.) gives contract for, 1321.
——Suburb, 1,350 ornamental standards for, 1265.
——Tables for 1926, "Electrical World," 1119.
——Traffic signals, utility companies as consultants on electric (editorial comment), 401, comments (Clifford E. Ives), 750, (William J. Sindorf), 750, (O. D. Ziegler), 800.
——Utility company's advisory function in stimulating ornamental (editorial comment), 156.
——Utility viewpoint, from (G. H. P. Dellmann), *1203.
Lighting, window:
——Contests improve store lighting (F. C. Eteson), *522.
——Pacific Gas & Electric's display window, commercial customers use, *1060.
Lightning:
——Cables, protective value of (R. Stein) D, 959.
——Disturbances and protection (A. Matthias) D, 278.
——Experience with (D. D. Clarke), 20.
Load factor, economic habits of large centers may determine (editorial comment), 447.
Locomotives (see Railways).
Logging, electric and steam (P. A. Wickes and Joseph W. Gill) D, 1013.
Louisiana:
——Consumers' Light & Power bought by Citizens' Light & Power Company, 712.
——New Orleans consolidation, 1272.
Louisiana (Cont.):
——Power & Light Company's Sterlington plant, 1067, *1325.

M

Machinery, electric:
——Balancing machine, new (H. Hort) D, 424.
——Balancing the centrifugal forces in rotating (C. Richard Goderberg) D, 526.
——Eddy currents in, losses due to (J. Wennerberg) D, 25.
——Hydrogen as a cooling medium for (Knowlton, Rice and Freiburghouse) D, 377.
——Salient-pole, no-load characteristics of (H. de Pistoye) D, 1115.
——Shaft deflection, problems of (Robert Lochner) D, 1115.
——Synchronizer, automatic (G. Sartori) D, 526.
——Synchronous, short-circuit currents in (R. F. Franklin) D, 574 (Vladimir Karapetoff) D, 424.
Magnetic:
——Air-gap, field in non-salient pole machinery (B. Hague) D, 1011.
——Analysis, detecting flaws by (R. L. Sanford), *309.
——Conditions in electrical machinery (C. MacMillan) D, 180.
——Hysteresis in permalloy, effect of tension upon magnetization and (D), 474.
——Materials, properties and testing of (T. Spooner) D, 78, 758, 911, 959, 1320.
——Permeability and Hysteresis loss, effect of superposed alternating field on apparent (T. Spooner) D, 26.
Magnets:
——Permanent, in electrical apparatus (E. A. Watson) D, 759.
——Permanent, in theory and practice (S. Evershed) D, 708.
Maine:
——Central, Power Company:
Hydro plant, 712.
Insull interests acquire, 185.
——Farmers urged to favor power exportation, 1325.
——Fundy plan approved, 577.
——Tidal power, exportation of, 380.
Maintenance (see Inspection and Maintenance).
Management:
——Bids for apparatus, analyzing (Thomas E. Penard), 948.
——Budget—A tool of (editorial comment), 887.
——Budget season calls for planning (editorial comment), 1089.
——Byllesby executive on (John J. O'Brien), *161.
——Competitive aspects of central-station service (editorial comment), 735.
——Consolidation and its lesson to electric utilities, forced railroad (editorial comment), 549.
——Executive personnel, changes in (editorial comment), 155.
——Executives and public relations (editorial comment), 1039.
——Good business, good engineering deserves (editorial comment), 1141.
——Industry's great problem, says Swope, 1229.
——Surplus industrial power, should central-station companies buy? (editorial comment), 1293.
——System developments, fundamental plans for (editorial comment), 1191.
——Telephone book, take a leaf from the (editorial comment), 1192.
Manufacturing and markets, domestic:
——Activities of the trade (see Trade activities).
——American Brown-Boveri Electric Corporation, 770.
——Appliances:
Advertising, 1177.
Merchandising (Edward N. Hurley), 91.
——Barometer of busintss (see Business).
——Bid, the lump-sum (E. S. Lincoln), 923.
——Boiler suit, 484.
——Brushes, carbon, 771.
——Building construction, 193, 390, 538, 588, 672, 822, *872, 925, 1074, 1280.
——Building contracts in 36 eastern states by territorial divisions, *143.
——Business:
Barometer of, "Electrical World's," *170, *510, *698, *891, *1101, *1308.
Barometer, wanted—A dependable (editorial comment), 1037, comment (F. S. Dewey), 1208.
Coolidge reassures "true business," 1126, editorial comment, 1089.
Hoover believes situation favorable, 143.
1926, in, 1279.
Swope expects better, in 1926, p. 1126.
——Cable, non-metallic sheathed, 485.
——Census of manufactures, 1178.
——Chicago district, Electric Association in, 719.
——Chucks, magnetic, 438.
——Construction (see Building).
Manufacturing and markets (Cont.):
——Contractor-dealer: trade policy of the Electragists (O. Fred Rost), *820.
——Cranes, electric, 340.
——Credit and collections:
Conditions, 194, 292, 537, 1178.
Electrical Credit Association, Central Division meeting, 1018, 1120.
Over-extension of credit (J. L. Kline), 290.
——Dealer prosper, the only way to make the (editorial comment), 352.
——Department of Commerce market analysis of Philadelphia, 587.
——Distribution apparatus, 144, 875, 1077.
——Distribution, merchandise:
Atlantic States, in, 972.
Electragists', policy (O. Fred Rost), *820.
——Electric Power Club as a business asset (Alfred E. Waller), 873.
——Engines, 821.
——Fans, 93.
——General Electric Company, Swope expects better business in 1926, p. 1126.
——Graybar Electric Company formed, *1330.
——Heating, industrial, 94, 195, 535, 925.
——Hoists, electric, 340.
——Hydro-electric equipment, 772.
——Inspection, more effective electrical (William S. Boyd), 1176.
——Instruments, electrical recording, 588.
——Jobbers:
Competition must be met (A Jobber), 192.
Co-operation still needed, better (Central Station Purchasing Executive), 436.
Margins (W. P. Herstein), 37.
Power companies, jobbers' future position and relation with (R. F. Pack), *1151.
Sales policy of Pettingell-Andrews Company, 1076.
Service, keeping up the spirit of (Frederic P. Vose), 339.
Syndicate, can the jobber serve the? 239.
Vocabulary, and his (Howard A. Lewis), 1230.
——Lamps, incandescent, 92.
——League work, local, 670.
——Lighting:
Advertising campaigns, *484.
A. I. E. E. committee report on, 92.
Fixtures and equipment, 242, 293, (A Fixture Jobber), 535, 773, 1077.
Industrial, campaign (Supply Manufacturer), 1176.
Shop and show window, model, *437.
Street, equipment, 1179.
——Line-construction materials, 95, 145, 242, 293, 439, 486, 672, 1232, 1332.
——McGraw, James H., awards to contractor-dealers, 670.
——Machinery development costs, reducing ("Observer"), 973.
——Management is industry's great problem, says Swope, 1229.
——Manufacturer:
Consumer and, 291.
Co-operation (Supply Manufacturer), 1176.
Opportunities for the small (L. P. Ayres), 770.
The promising position of the electrical (editorial comment), 1038.
——Material handling equipment, 292.
——Metal market, 40, 94, 144, 194, 241, 292, 340, 390, 438, 486, 536, 588, 671, 719, 772, 822, 875, 925, 974, 1025, 1070, 1128, 1179, 1231, 1280, 1331.
——Metals consumption, 240.
——Motors:
438, 822, (editorial comment), 885, 924, 1023, 1074.
Fractional-horsepower market (F. W. Jessop), 1074.
Small (editorial comment), 885.
——National Distribution Conference, 1278.
——National Industrial Conference Board's report, 718.
——Ohio Brass Company host of McGraw-Hill men, *1075.
——Patents:
Hayne Conference to discuss, 437.
Purchases and license agreements (H. A. Toulmin, Jr.), 586.
——Pioneering, reducing losses in ("Observer"), 91.
——Poles:
Timber, conservation of (W. F. Bancker), *1127.
——Power equipment, 439, 1077, 1178, 1232.
——Power Show, 1177.
——Preparedness, industrial, 872.
——Radio, 242, 340, 537, 866, 1273.
——Ranges, 41, 145, 241, 589, 671, 1128.
——Refrigerators, 1279.
——Signs, electric (James M. Gilchrist), 192, 485.
——Simplification:
Brushes, carbon, 771.
Department of Commerce program, 536.
Lamps, 92.
"Policing," no thought of, 436.

*Indicates illustrated articles

Manufacturing and markets (Cont.):
——Special apparatus, cost of making (C. H. Roth), 39.
——Specialties, value and simplification of (G. P. Edmonds), 240.
——Stokers, 93.
——Substandard material (A Supply Manufacturer), 142.
——Substation equipment, 875.
——Tax law, industry opposed to estate, 924.
——Telephone system's centralized purchase and manufacture, 290.
——Tennessee tax on electric goooods held illegal, 291.
——Towers, transmission, 241.
——Trade acceptance experience, 142.
——Trade activities, 42, 93, 146, 195, 243, 293, 342, 391, 439, *487, 538, 590, 673, 721, *773, 823, 876, 926, 975, 1026, 1077, 1129, 1179, 1233, 1281, 1333.
——Trade association activities, 92, 821, 97, 1331.
——Trade literature (see under "T").
——Trademarks, 437.
——Transformers, 222.
——Trucks, electric, 144, 772.
——Tungsten, 536.
——Vacuum cleaners, 93, 292, *771.
——Voltage regulator, 538.
——Washing machines, 390, *972.
——Waterwheels, 821.
——Western Electric forms new company, *1330.
——Wire, 41, 293, 925.
——Wiring:
All-metal propaganda, 1278, (editorial comment), 1241.
Devices, 194, 589, 1230.
Sheathed cable, non-metallic, 485.
Manufacturing and markets, foreign:
——China, 771.
——Europe, 239.
——Exports, electrical, May, 145, June, 341, July, 720, August, 874, September, 1023, October, 1229.
——France, 339.
——Germany, 436.
——Great Britain, 923, 1278.
——Japan, 588.
——Latin America, heating appliances, 94.
——Latin markets, the near-by (R. A. Lundquist), 338, 388.
——Mexico, *718.
——Publishers join to cover foreign market, 383.
——Russia, 588.
——Tape, friction, 537.
——Trade opportunities, 43, 97, 147, 197, 244, 295, 342, 393, 441, 489, 541, 591, 675, 723, 775, 825, 877, 928, 977, 1079, 1131, 1181, 1234, 1283.
——World market for electrical goods (Hugh Quigley) D, 26.
Markets (see Manufacturing and markets).
Maryland:
——Baltimore: Consolidated Gas, Electric Light & Power Co.
Industrial load census (F. M. Weller), *1051.
Radio broadcasting station, *1019.
Rate, extends its four-cent, 665.
Wagner deprecates inflation of utility stocks, 426.
——Conowingo project, 28, 133, 184, 530, 666, 762, 863, 966, 1014, 1219, 1323, editorial comment, 603.
——Utilities Association mid-year meeting, 666.
——Youghiogheny Hydro-Electric Corporation's Deep Creek hydro-electric development, *1040.
Massachusetts:
——Boston:
Affiliated Technical Societies, fuel and power meeting, 1171, 1272.
Lighting campaign, industrial, *158.
Municipal light plant order vetoed, 1014.
Edison Electric Illuminating Co.
Rate reduction ordered, 283.
Weymouth station (D), 861.
——Cambridge, little chance of municipal ownership at, 913.
——Department of Public Utilities fears extra-state control, 1219.
——Haverhill and Newburyport companies to combine, 577.
——Rate decisions, two (editorial comment), 301.
——Reading city plant will buy central-station energy), 913.
——Salem, Tenney companies' new plant at, 32.
Material handling (see Handling materials).
McGraw, James H., awards, 429, 666, 670, 964, *1024, 1075.
McGraw-Hill Company and United Publishers' Corporation form Business Publishers' International Corporation, 383.
Measurements and measuring:
——Asymmeter, the (C. Schmittutz) D, 279.
——Cathode ray, in electrical engineering by means of (J. T. MacGregor-Morris and R. Mines) D, 1319.
——Cathode-ray tube as a wattmeter and phase-difference measure for high-frequency electric currents (J. A. Fleming) D, 1319.
Coaxial, calculating the repulsion of (H. B. Dwight) D, 808.
Coaxial cylindrical, of small radial depth, calculation of the mutual inductance of (F. B. Vogdes) D, 808.
Measurements and measuring (Cont.):
——CO_2 recorders, tests of (J. F. Barkley) D, 180.
——Deelectric:
Absorption (Ralph E. Marbury) D, 377.
Loss, on commercial insulating materials (C. Dannatt) D, 861.
Losses at high voltages (B. Hague) D, *707.
——Electromagnetic induction between an aërial line and neighboring circuits, "K-M" chart for computing (R. Mitsuda and K. Kasai) D, 326.
——Energized circuits, indication of (W. J. Ducey), *369.
——Inductance and capacity: Effects of harmonies on their apparent values (Philip Kemp) D, 1165.
——Instruments, new (S. Held) D, 1165.
——Light during the solar eclipse of January, natural (D), 525.
——Magnetic conditions in electrical machinery (C. Mac Millan) D, 180.
——Motors, slip of (R. Vieweg and H. E. Linckh) D, 525.
——Oscillographs, new types of (editorial comment), 157.
——Radio-frequency:
(E. B. Moullin) D, 26.
Harmonic generator, by means of (August Hund) D, 326.
Resistance, an electrometer method for (P. D. Pedersen) D, 279.
——Rubber, effects of corona on (F. L. Hausshalter), *267.
——Spark gap, the sphere (R. Edler) D, 1216.
——Spectral energy distribution by Planck's formula, facilitating the computation of (D), 910.
——Springs, forces in bent helical (R. Zeigler) D, 78.
——Torsion meter and some problems of shaft oscillations, distant indicating (E. B. Moullin) D, 1062.
——Turbo-generators, of electrical output of large a.c. (Everett S. Lee) D, 575, 1165.
——Vibration recorder for pathological analyses (Chester I. Hall) D, 424.
——Wave-form analysis on rectified circuits (L. B. W. Jolley) D, 229.
——Windage loss in air, hydrogen and carbon dioxide (Chester W. Rice) D, 279.
Merchandising (see under Commercial practices and Manufacturing and markets).
Metals:
——Electricity in, motion of (D), 26.
——Transmutation of (editorial comments), 784.
Meters and metering (see also Instruments and Measurements):
——Connections on neutral-grounded three-phase systems (D. Freyer) D, 1115.
——Dayton Power & Light Company's, methods (Karl H. Bausman), *1093.
——Demand, installation, 1058.
——Electrolytic (K. Kessler and W. Krukowsri) D, 861.
——Kilovolt-ampere (G. W. Stubbings) D, 25.
——Metermen, an opportunity for (editorial comment), 936.
——Multiple-rate (L. Martenet) D, 758.
——Reactive, and graphs to determine power factor, use of (O. N. Hansen), *952.
——Record system (W. L. Carr), *567.
——Relays, used as reverse-current, 417.
——Side trim for, home-made (H. A. Clark), 753.
——Test board (Colborn E. Blaisdell), *856.
——Testing, periodic (Karl H. Bausman), *1260.
——Watt-, electrostatic (editorial comment), 55.
Metric:
——Association meets, 135.
——System legislation seems unlikely, 136.
Mexico:
——Hydro projects in, 664.
Michigan:
——Consumers' Power Co.:
Coffin medal to, *29.
Interconnected system, operating a fully (Allen M. Perry), *604, *652, *693, editorial comment, 683, comment (G. A. Iler), 853.
——Detroit:
Plant, contract let for new city, 1068.
——Detroit Edison Co.:
Dow, Alex, denounces speculation, 709.
Financial set-up (Paul Willard Garrett), *1031.
Municipal plant and, 1169.
120,000-volt transmission line, *1296.
Switching station built in a day, 333.
Trenton Channel plant (C. F. Hirshfield) D, 424.
——Electric Light Association convention, 28.
——Gas & Electric Company's automatic hydro-electric generating station, *373.
——Lansing, "public power conference" at, 867.
——Menominee River water shortage, 330.
——University of, electrified hospital, 408.
Middle West power conference, 1324.
Middle West Utilities Co. (see Insull interests and Financial).
Mills:
——Brass, novel motor drive in, (Gilbert L. Lacher) D, 1012.
——Lumber, electricity in Alaska, 1208.
——Paper, electric drive in a modern (O. C. Cordes and B. L. Kerns), *1142.
Mills (Cont.):
——Steel:
Blooming-mill drive (Rogers A. Fiske) D, 1062.
Europe, rolling-mill drives in Continental (O. Needham) D, 474.
Foreign practice (W. H. Burr and F. L. Estep) D, 474.
Motors in, electric (D), 181.
Rectifier plant in rolling, large (W. Zimmerman) D, 809.
Rolling, drive with three-phase motors (M. Danbon and R. Jung) D, 575.
Rolling, electric power in, *1211.
Rolling, electrical drive for (H. C. Uhl) D, 474.
——Textile, electrifications in the South, early (B. S. Havens) D, 809.
Milwaukee (see Wisconsin).
Mines and mining:
——Coal:
Electricity in (E. Ivor David) D, 230.
Strike, anthracite (editorial comment), 301.
——Electricity in (E. Ivor David) D, 230.
——Excavation, steam and electric shovels in open (D), 1116.
——Lamp, electric (M. Mathivet) D, 1013.
——Strip, desirable wad (Albert Clabaugh), *753.
Minnesota:
——Toshay Company gets two more plants, 1324.
——Northern States Power Company's appliance sales to family income, relation of, *523, editorial comment, 499.
——St. Paul Gas Light Company, Byllesby to buy, 961.
——Trucks, tax a handicap for electric (H. S. Greiner), 517.
Mississippi:
——Hydro-electric development, 478.
——River Power Company, North American buys control of, 763.
Missouri:
——Hydro-Electric Company's Ozark hydro-electric plant, 917.
——Laclede Gas Light Company denies merger story, 330.
——St. Louis lets contract for street lighting, 1321.
——Union Electric Light & Power Company takes over Mississippi River Power Company, 1167.
Montana, electric power in, *1194.
Motor control:
——Contactors for industrial (W. Wilson) D, 327, 575, 862.
——Pumps, for dual-driven circulating (John W. Anderson), *1006.
——Starter, mechanical (M. Preel) D, 960.
——Starters, automobile (A. Dubois) D, 1320.
Motor-generator sets (J. Bellaigue) D, 424.
Motors:
——Asynchronous:
Compensated (L. Dreyfuss) D, 911.
Compensated, in Europe (Fr. Kade), *1208 correction, 465.
Compensated, large (G. Belfils) D, 911.
——Alternating current:
Windings of, extra losses in the (J. Wennerberg) D, 526.
——Brick-yard power load, 300-hp. (Marshall V. Robb), *1253.
——Brickyard uses 1,000 hp. in (G. R. Mitten), 126.
——Coil heads, space requirements of (M. Dufour) D, 79.
——Compressors, pressure regulator for electric air (F. Eckinger) D, 130.
——Direct-current:
Sparking, preventing them from, 420.
——Drives, balancing individual against group, 1312.
——Explosion-proof (H. Knöpfel) D, 707.
——Fynn, and a predecessor (Val A. Fynn), 317, comment (K. L. Hansen), 416, commercial (H. L. Cape), 699, comment (R. M. Longman), 1055.
——Fynn-Weichsel, power-factor correction by (F. B. Wipperman), 855.
——Glass manufacture, purchased power as applied to plate (A. L. Harrington) D, 130.
——Group driving on its last legs, is? (editorial comment), 1243.
——Ice-plant drives, unbiased comparison of (Ice Machine Manufacturer), 264.
——Individual drive in electrical manufacturing plant, *1010.
——Induction:
Agricultural (L. Riefstahl) D, 1012.
Compensated (Theodore Torda), *1205.
Large, effect of unbalanced secondary conditions on operation of (A. F. Kenyon) D, 862.
Low-starting-current, development (P. L. Alger) D, 378.
Phase compensation (T. Ellis) D, 130.
Polyphase, overload capacity of (L. Dreyfus) D, 474.
Slots, design of (I. C. Wharfe) D, 759.
Synchronous, pulling into step a (D), 230.

*Indicates illustrated articles

Motors (Cont.):
Temperature rise of, reversed-rotation short-circuit (J. H. R. Nixon) D, 1063.
Three phase, use of polyphase frequency changers for phase compensation of (L. Dreyfus) D, 26.
Two-speed cascade (A. H. M. Arnold) D, 1267.
Ventilation of large (D. F. Alexander) D, 1166.
——Industrial plants, large or small, for (Morgan G. Farrell) D, 862.
——Laundry electrification (Ford Bates), *226.
——Mills:
Brass, in (Gilbert L. Lacher) D, 1012.
Steel, in (D), 181.
Steel, in rolling, *1210.
Steel, blooming-mill drive (Rogers A. Fiske) D, 1062.
——Molder, electric (Andrew Jensen) D, 1216.
——Paper cutter operates automatically, *1261.
——Paper mill, in a modern (O. C. Cordes and B. L. Kerns), *1142.
——Power-house, relay protection for (Ralph Kelly) D, 910.
——Railway, new-type (W. Oelschlager) D, *79.
——Ring-spin machines, electric drive of (W. Kerb) D, 1012.
——Rolling-mill drive with three-phase (M. Danbon and R. Jung) D, 575.
——Rotor design, high-speed (D), *425.
——Sand screens, driven, 320.
——Secondary networks, performance on combined (A. P. Fugill) D, 230.
——Slip, measurement of (R. Vieweg and H. E. Linckh) D, 525.
——Squirrel-cage armature (E. Rosenberg) D, 707.
——Stone industry, in the crushed (E. W. Pilgrim) D, 1116.
——Synchronous:
Power-factor correction with (N. J. Reed), *467.
Pumps, for dual-driven circulating (John W. Anderson), *954.
Self-excited (J. K. Kostko) D, 230.
Voltage and power-factor regulation, used for (S. H. Mortensen) D, 327.
——Textile electrifications in the South, early (B. S. Havens) D, 809.
——Totally inclosed, for specified temperature rises, output of (Frederick Murgatroyd) D, 1267.
——Wind, high-speed (K. Bilau) D, 950.
——Windings with synthetic resins, impregnating, 1056.
——"York," the new (D), 707.
Municipal ownership (see Ownership).
Muscle Shoals (see Hydro-electric developments).

N

National Association of Railroad and Utilities Commissioners convention, 812, 815, editorial comment, 783, 835.
National Electric Light Association:
——Commercial Section:
Committee chairman, 813.
Committee meetings, 813.
Lloyd, E. W., heads, 476 interview with, *557.
——Committee chairman and meetings, 331, 381, 813.
——Convention:
1926, in Atlantic City, 709.
Parallel sessions cost too much (editorial comment), 2.
——East Central Division convention, 29, 134.
——Eastern Geographic Division convention, 428, 528, 579.
——Executive committee meeting, 963.
——Great Lakes Division convention, 528, 582, 711.
——Hurley prize, the, 31, (editorial comment), 353.
——Kansas Section established, 917.
——Lighting activity, industrial, 285, 381, 709, 1223.
——New England Division:
Convention, 383, 527.
Women's meeting, *1114.
——North Central Geographic Division convention, 85, 163, 186.
——Public relation section: Barton envelope Stuffers, *363, editorial comments, 351, 448.
——Rocky Mountain Division convention, 331, 581, 1170.
——Southeastern Division convention, 867, 966, editorial comment, 935.
——Southwestern Geographic Division convention, 1069.
——Technical National Section, committee meetings, 813.
——Wiring Committee opposes all-metal propaganda, 1278, (editorial comment), 1241.
——Women's work, electrical (editorial comment), 2.
National Electric Code. (see Code).
National Electrical Credit Association (see Credit and Collections under manufacturing and marketing).
National Safety Council Public Utilities Section meeting, 381, 763.
Nebraska:
——Foshay Company buys power system, 1118.
New England:
——Buying of properties, more, 916.
——Industrial load of, 512.
——Power Company:
Development of, 761, 811.
Housing hydro plant operators, *33.
New interests allied with, 761.
Pool (editorial comment), 835.
Reorganization plan, 1118.
Sherman Bridge plant, 284.
——Power Conference, 1016, 1069, editorial comment, 1069.
——Power pool, Young on, 1016.
New equipment, *42, *96, 146, *196, *243, *294, *392, 440, *488, *540, 590, 674, 722, 774, 824, *927, 976, 1027, 1130, 1180, 1233, 1282, 1334.
New Hampshire:
——Manchester utility, Insull interests seek, 27.
——Salem Electric Company sold, 1272.
New Jersey:
——Tri-State Power Commission, 913, 965, editorial comment, 935.
New York City:
——Brooklyn Edison Co.:
Condenser for, 80,000-sq.ft., 761.
Hudson Avenue station, combustion control at the (W. C. Holmes), *628.
System operation, economic (E. C. M. Stahl), *165.
——Edison Co.:
Appliance and lighting load survey, *375.
——Edison Co.:
Legal return, away within, 1323.
Rate case, 185.
——Electrical and Industrial Exposition, 866, editorial comment, 835.
——Engineers hear about energy from subterranean heat, 1016.
——Industrial museum advocated, 1120.
——Power mergers, Hylan fights, 83, 133, editorial comment, 103.
——Power Show, 1119.
——Staten Island lines of Baltimore & Ohio, electrification of, *1244.
——United Electric Light & Power Co., Hell Gate station, electrical delegates from France visit, *814.
——Up-state mergers, opposes all, 133, editorial comment, 103.
New York State (see also New York City):
——Barge Canal division, 29, 814.
——Buffalo abandons gas street-lighting, 329.
——Cable, 132-kv., 1223.
——Delaware corporation purchase approved in, 962.
——Eastern States Power Corporation formed, 917.
——Empire State Gas & Electric Association:
Commercial section meeting, 30.
Convention, 664, 763.
Electric Section's annual meeting, 1223.
Meter section meeting, 915.
——Hudson River Regulating District attacked, 184.
——Mergers approved, 183.
——Mergers, New York City opposes all upstate, 83, 133, editorial comment, 103.
——Niagara Falls:
Diversion postponed, 913.
Hoover's observations on, misunderstood, 382.
Illumination, *106.
Power Company authorized to increase division, 867.
Preservation of, General Taylor on, 1017.
——Niagara Frontier League's lighting exhibit, 476.
——Power & Electric Securities Corporation buys light and power plants, 962.
——Rate cuts, 1273.
——Tri-State Power commission, 913, 965, editorial comment, 935.
New Zealand hydro-electric development, *888.
Niagara Falls (see New York State).
Nickel, non-magnetic films of (L. R. Ingersoll and S. S. De Vinney) D, 960.
Nitrogen fixation, commercial status of (J. M. Braham) D, 1267.
North Carolina:
——Carolina Power & Light's unusual place (Paul Willard Garrett), *347.
——Hydro-electric developments, 332.
——Southern Appalachian conference on power development, 764.
——Southern Power Co.:
Drought in Piedmont region, 914.
Service, curtails, 426.
Steam plant on Catawba River, to build, 580.
Yadkin River steam plant, 1117.
North central states, industrial load of, 1002.
Northwest Inspectors' Association organizing, 1272.
Norway:
——Bergen, development in, 9.
——Cables in Bergen, underground fiber conduits for high-tension (Lars Rivenes) D, 1165.
——Morkfoss-Solbergsfoss hydraulic power station (Georg Brochmann) D, 377.
——Water power, *4 (Ove Collett) D, 1216.

O

Obituaries (see Personal Mention).
Ohio:
——Cleveland Electric Illuminating Company's experience with powdered fuel, 72.
——Cleveland municipal plant, 1015.
——Columbia Power Company's Miami Fort station, *1270, (editorial comment), 1241.
——Columbus Railway, Power & Light Company's new generating station, 1119.
——Consumers, has a million, 30.
——Dayton Power & Light Company's meter methods (Karl H. Bausman), *1093.
——Edison Company's new station, 427.
——Electrical development, *477.
——Lighting service interrupted when railway plant burns, 428.
——Power Company's Philo station (M. L. Sindeband and P. Sporn), *355, *403.
——Public Service Company's residential lighting sales, *892, editorial comment, 886.
——River Edison Company's contract, 478.
——River dam, 100,000-hp. hydro plant at, 133.
——River government dam may be raised, 85.
——Toledo Edison Company's growth (Paul Willard Garrett), *151.
——United Light & Power Company takes over five plants, 332.
Oil:
——Circuit breaker, purifying (Lee Hinchman Clark), *562.
——Dielectrics, study of liquid (Wheeler P. Davey and Thomas A. Wilson) D, 1217.
——Filter for substation use, portable, *222.
——Filtering, hastening (W. G. Shurgar), 802.
——Pumping, electrically (S. G. Gassaway), *374.
——Pumping equipment, evolution in oil-line (William N. Beadle) D, 1116.
——Purification with Fuller's earth (Heyden and Typke) D, 1063.
——Synthetic, and caloric power plants (Zur Nedden) D, 808.
——Testing method (Heyden and Typke) D, 808.
——Transformer, purification plant on wheels (A. H. Nicholson), *567.
——Transit, handling (D. R. Dalzell), 854.
——Well drilling, electric power for, 76.
Oklahoma:
——Gas & Electric Company:
Horseshoe Lake plant, 1271.
Merchandising (J. W. Devereaux), *1059, editorial comment, 1038.
Permits, asks for revocable, 1067.
——Power Company's Tulsa station (James F. Brown), *839.
——Permit issued in, first revocable, 282.
——Southwestern Light & Power Company uses radio between stations, 1120.
Ontario (see under Canada).
Oregon:
——California—Power Co. Byllesby interests acquire, 961.
——Electric power in, 1194.
——Interconnection in, 133.
——Portland's new power rate, 427.
——Portland Electric Power Company's Oak Grove high-head-turbine (Ely C. Hutchinson) D, 229.
——State ownership in, for initiated, 1068.
Oscillographs (see Instruments).
Output. (see Statistics).
Ovens, electric (see also Ranges):
——Bread, bakes 3,600 loaves hourly, *757.
Overhead (see Distribution and Transmission).
Ownership:
——Customer:
Byllesby executive on (John J. O'Brien), *161.
Lead us, Whither will it (editorial comment), 602.
Partners, should develop real, 128.
Stock sales *200, *444, *726, *1134, *1338.
——Government, municipal, public, state, etc.:
Cambridge, Mass., little chance at, 913.
Culpeper (Va.) votes down municipal plant, 529.
Cleveland's municipal plant, 1015.
Drift away from municipal, widespread, 1325.
Editorial comment, 157.
Oregon, for initiated state ownership in, 1068.
Pacific Coast, checked on the (editorial comment), 53.
"Public power conference" at Lansing, 867.
Tennessee River, agitation for upper, 1170.
Western Division of Chamber of Commerce discusses, 1221.
Williams debates Hillquit, 31.

P

Pacific Coast (see West, the):
Paint tests, results of preservative, 751.
Paris (see France).
Patents:
——French inventions, 339.
——Office improvement, 478.
——Record of electrical, 45, 99, 149, 199, 246, 297, 345, 395, 443, 491, 543, 593, 676, 725, 777, 827, 879, 930, 979, 1030, 1081, 1133, 1183, 1236, 1285, 1337.
——Squier case, Supreme Court refuses review of, 863.
——Vacuum-tube, General Electric gets basic, 866.
Pennsylvania:
——Bridge over Susquehanna at Clark's Ferry, lighting, *1121.
——Conowingo project, 28, 133, 184, 530, 666, 762, 863, 966, 1014, 1219, 1323, editorial comment, 603.
——Electric Association convention, 448, 528, 579.
——Electric Corporation to be sold to Associated Gas & Electric Co., 330.
——Giant power survey:
Pinchot lauds, 183, editorial comment, 155.
Pinchot's tour in behalf of (editorial comment), 104.
To be reconsidered, 1272.
——Lehigh Power Securities Corporation (Paul Willard Garrett), *931.
——Penn Central, Albert Emanuel to buy, 333.
——Philadelphia:
Department of Commerce market analysis of, 587.
Electric Company's joint merchandising plan, 956, editorial comment, 936.
Liberty Bell, large illuminated, *967.
Lighting in, industrial (M. C. Huse), *1153.
——Pinchot, Governor:
Extra session, calls, 1169.
Giant power survey, work for, 183, editorial comments, 104, 155.
State regulation, view of, 281.
Utility regulation, on (editorial comment), 301.
——Pittsburgh:
Power factor in practice (L. W. W. Morrow), *213.
——Pittsburgh: Duquesne Light Co.:
Costs, analyzing utility construction (P. O'Moore), *168.
Distribution system, 4,000-volt (Samuel Rosenbach) D, 129.
——Public Service Commission, court overrules Pinchot on, 1117.
——Susquehanna Power Company:
Conowingo project, 28, 133, 184, 530, 666, 762, 863, 966, 1014, editorial comment, 603.
Pennsylvania Water & Power Company, disagreement with, 577.
——Tri-state power committee, 913, 965, editorial comment, 935.
——Water & Power Co.:
Holtwood steam plant, 183.
Susquehanna Power Company, disagreement with, 577.
Philadelphia, (see under Pennsylvania).
Photography:
——Airplane speeds up power surveys (J. B. Beadle), *311.
——Telephotograph added to commercial communication facilities, *311.
Pipe:
——Bender for large (Louis D. Moore), *1314.
——Covering for, carrying steam up to 800 deg. F. (W. A. Carter and E. T. Cope) D, 1115.
——Electrically-welded, for long line, 1070, editorial comment, 1039.
Plating:
——Chromium on steel (D), 809.
——Chromium, principles and operating conditions of (H. E. Harking) D, 809.
Poles:
——Concrete:
Reinforced, calculation of (E. Loos) D, 574.
——Derrick for small towns, inexpensive *955.
——Lifting, derrick truck for, *74.
——Setting by machine, cost of (R. N. Carter), *507.
——Steel:
Great Western Power Company's, construction, 72.
——Wood:
Calculation (H. Neulat) D, 25.
Consumer can benefit himself, how the (H. S. Sackett), *1245.
Erecting 45 poles per day with 9 men (B. E. Ellsworth), *71.
110-kv. California line, used in, *1313.
Setting, special truck for, *1109.
Porcelain (see Insulators).
Portland, (see Oregon):
Porto Rico levies a tax for water-power development, 916.
Powdered fuel (see Fuel).
Power factor:
——Control of, for tied-in stations (J. Kristen) D, 1266.
——Correction:
Frequency changes, joint use of (G. L. Furr), *1049.
Hosiery mill, in a (E. N. Dittenhofer), *365 comment (Charles R. Underhill), 465, comment (F. I. Hiss), 1055.
Motor, at the, 903.
Motors, by Fynn-Weichsel (F. B. Wipperman), 855.
Motors, with synchronous (N. J. Reed), *467.
Popular (editorial comment), 204.
Station, in temporary, *1315.
Study of (R. A. Lane), *803.
——Discard the term, why not (editorial comment), 837.
——England, needs improvement in (H. L. Cape), 699.
——Low, and transmission losses (P. C. Shults), *175.
——Low, cost and prevention of (Philip Chapin Jones), *316.
——Pittsburgh district, in practice in (L. W. W. Morrow), *213, editorial comment, 204.
——Questions in medium-voltage networks (F. Pichler) D, 959.
——Raising, covers loss of generator, 1211.
——Reactive meters and graphs to determine, use of (O. N. Hansen), *952.
——Research laboratory raises system, 1111.
Power production (see Generation).
Power transmission, (see Transmission).
Prices (see Costs, Manufacturing and markets and Statistics):
Protection:
——Electrodes, maximum current strength in earthing (L. P. Podolsky), D, 25.
——Relay, differential (P. Bary) D, 1011.
Public relations:
——"Big business" to the public, interpreting (Martin J. Insull), *261.
——Brooklyn Edison chauffeurs visit traffic court, 77.
——Byllesby executive on timely subjects (John J. O'Brien), *161.
——California Oregon Power Company dedicates new power plant, *472.
——California-Oregon Power Company's helps, *376.
——Collections and (A. B. Wollaber), 842.
——Complaints reduced 81 per cent, potential, *1263.
——Doing more than the law requires (M. S. Sloan), 749.
——Edison Lamp Works; advertising campaign, 485.
——Executive personnel, changes in (editorial comment), 155.
——Executives and (editorial comment), 1039.
——Fire fighters, first aid to, *1215.
——Friendship, explain real purpose of seeking (editorial comment), 400.
——Good, built on good employee relations (editorial comment), 55.
——Hartford (Conn.) Company's "customers' dividend," 232.
——Improving, suggestions for (A. P. Singer), 511.
——Indianapolis a better lighted city, making, *422.
——Lay helpers, enlisting (editorial comment), 1293.
——Load demands clear to the public, making, *1213.
——N.E.L.A. phamphlets, *363, editorial comments, 351, 448.
——New England women utility employees meet at Hartford, *1114.
——Pacific Gas & Electric's display window, commercial customers use, *1060.
——Pacific Power & Light, "introducing," 571.
——Public utility securities and savings banks (editorial comment), 253.
——Radio aërials, New England central stations and, 909.
——Rates, when they are reduced (editorial comment), 549.
——Salesroom as meeting place for civic associations, utility, *958.
——Security, eleven tests of a good utility, 957.
——Service application counter, watch the (editorial comment), 784.
——Service to industry, widening (editorial comment), 935.
——Sign for construction work, street, *24.
——Talks in department stores, 177.
——Trade relations and (editorial comment), 303.
——Trees, trimming shade (editorial comment), 936, comment (Frank W. Smith), 1157.
——Trouble crew and maintenance department (A. B. Wollaber), 1207.
——You are the company (editorial comment), 936.
Public Service Company of Northern Illinois (see Illinois).
Pulverized fuel, (see Fuel).
Pumps and pumping:
——Circulating, control for dual-driven (John W. Anderson), *1006.
——Circulating, synchronous motors for dual-driven (John W. Anderson), *954.
——Oil electrically, economies of (S. G. Gassaway), *374.
——Oil-line, equipment (William N. Beadle) D, 1116.
——Rupture of, service fuses operates signals (W. G. Shurgar), *322.

R

Radio:
——Aërials, New England utilities for safer, 909.
——Amplifiers, non-distorting power (E. W. Kellogg) D, 26.
——Antenna systems, re-radiation from tuned (Henry C. Forbes) D, 708.
——Arc, the Leafield coupled (A. G. Lee and A. J. Gill) D, 526.
——Beam direction finding (D), 911.
——Broadcasting:
English high-power station, new (D), 575.
Receiving apparatus (W. L. McPherson) D, 1012.
Reception problems (G. W. O. Howe), D, 1116.
Station of Consolidated Gas, Electric Light & Power Company of Baltimore, *1019.
——Cable, novel English (D), 1320.
——Central station and merchandising of (A. M. Wilson), 699.
——Condenser, "straight-line-frequency" variable (Henry C. Forbes) D, 759.
——Conference adopts a legislative program, 1017.
——Current-transformer methods of producing small, known voltages and currents at radio frequencies for calibrating purposes (D. W. Dye) D, *575.
——"Detection coefficient," a (Leo Broadwood) D, 1267.
——"Detection coefficients" (John J. Dowling and Joseph M. P. Higgins) D, 1320.
——Direction finding, effect of wave damping in (R. L. Smith-Rose) D, 960.
——Direction-finding equipment at Niton and Cullercoats (J. H. Reyner) D, 1320.
——Fessenden's suit, 1273.
——Filter condensers (R. E. Marbury) D, 230.
——Frequency by means of a harmonic generator, measuring (August Hund) D, 326.
——Frequency measurements (E. B. Moullin) D, 26.
——Frequency resistance, electrometer method for measuring (P. O. Pedersen) D, 279.
——Germany, regulations for outdoor aërials in (G. W. O. Howe) D, 378.
——Household electric service make it another standard (editorial comment), 501.
——Inductance of coaxial cylindrical coils of small radial depth, calculation of the mutual (F. B. Vogdes) D, 808.
——Interference analysis (L. J. Corbett), 1109.
——Interference and the power company (L. J. Corbett) D, 1063.
——Interference on air ships, prevention of (V. S. Kulebakin)D, 708.
——Loud speaker, development of new type of hornless (Chester W. Rice and Edward W. Kellogg) D, 1063.
——MacMillan Artic expedition, 285.
——Monopoly charges, trade commission hears, 866.
——Photo-electric cells, amplification of weak currents and their application to (Ferrié, Jouaust and Mesny) D, 758.
——Power plants, for communication between, 1120.
——Propagation both in theory and practice, recent advances in (A. S. Eve) D, 862.
——Receiving, effect of solar eclipse of January 24, 1925 on (Greenleaf W. Pickard) D, 1267.
——Reception; measurements in long-distance, 1924 (L. W. Austin) D, 425.
——Research progress, (editorial comment), 499.
——Short-wave transmitters and receivers, recent commercial developments in (Anderson, Clement and De Coutouly) D, 911.
——Signal strength measurements (Round, Eckersley, Tremellen and Lunnon), D, 130, 1116.
——Sound recording (F. Trendelenburg) D, 327.
——Stereo—acoustic sound reproduction (E. Meyer) D, 230.
——Telegraphy optimum damping in the auditive reception of signals (T. B. Turner and F. P. Best) D, 181.
——Transatlantic radio-telephony, power amplifiers in (A. A. Oswald and J. C. Schelling) D, 327.
——Transatlantic radio telephony, production of single sideband for (R. A. Heising) D, 378.

*Indicates illustrated articles

Radio (Cont.):
——Transmitter, a 200-kw. triode Balth Van Der Pol and K. Posthumus) D. 809.
——Trans-Pacific radio field intercity measurements (L. W. Austin) D. 130.
——Trend in, a new (editorial comment), 734.
——Tubes, electron and vacuum:
Applications, some (A. A. Tchernyshev) D. 26.
Development (B. S. Gossling and M. Thompson) D. 474, 809.
Detecting characteristics of (H. M. Freeman) D. 1166.
General Electric gets basic patent, 866.
Oscillation generator, the value as an (Dallas G. Bower) D. 1217.
——Warsaw, transoceanic station at (Lush, Johnston and Finch) D. 1166.
——Waves and their applications, ultra-audible (editorial comment), 205.
——Waves over long distances, short (editorial comment), 682.

Railway, electric:
——American Electric Railway Association convention, 712, 762.
——Articulated cars, four 200-hp. motors on (Clarence W. Squier) D. 1116.
——Australia, Melbourne suburban railway system's automatic substations (R. M Harvey) D. 280.
——Austria:
Electrification (Sir Philip Dawson and S. Parker Smith) D. 575, 759.
Electrification in (P. Dittes) D. 130.
Mountain (D. Winkler) D. *425.
Overhead construction of electrified (H. Luithlen) D. 26.
——Baltimore & Ohio, electrification of Staten Island lines, *1244.
——Braking on direct-current, recuperative (E. Helde) D. 809.
——Brazil, Corcovardo (D), 1217.
——Buses, electric drive for gasoline-propelled motor (Henry S. Baldwin) D. 862.
——Canadian National diesel-electric cars for (D), 1166.
——Chicago, Milwaukee & St. Paul electrification shows saving, 1324.
——Feeders and telephone lines, suppression of interference between (W. Schuler) D. 960.
——France:
Electrifications (Sir Philip Dawson and S. Parker Smith) D. 960, 1217.
Rectifiers, mercury arc (B. Schaefer) D. 181.
——Great Britain: Southern Railway electrification (D.), 526.
——Great Northern electrification (E. Marshall) D. 1267.
——Illinois Central:
Catenary construction and power distribution (D), 230, 809.
Commonwealth Edison' contract, 382.
Power-supply facilities (D), 575.
——Japanese electrifying state (H. C. Hickock) D. 862.
——Locomotives:
Detroit & Ironton, for (D), 708.
Diesel-electric (D), 1063.
Diesel-electric, "asynchronous couplings" applied to (J. Stetzoola) D. 378.
Northern Pacific's storage battery (D), 280.
Russia, Diesel-electric (G. Lomonossoff) D. 1320.
Virginian Railway, electric locomotion wins on, 665.
Virginia Railway orders 36 new, 134.
Yard (W. Lüthi) D. 1267.
——Motor new-type (W. Oelschlager) D. *79.
——New Haven's Danbury branch (H. F. Brown) D. 708.
——New York Central's new electrification, 1171.
——Norfolk & Western:
Completes train control (D. W. Richards) D. 230.
Electrification, 232.
——Passenger service, electrification of (D), 1320.
——Rail-bond tester (G. Palanchon) D. 1166.
——Rail welding (D), 26.
——Rectifier plant (C. Brynhildsen) D. 1012.
——Rectifiers, parallel operation of (E. Kern) D. 130.
——Signals operated by windmill, *1004.
——Southern Railway's new rolling stock (D), 425.
——Spain:
Ferrocarrils de Cataluna Y Sarria (H. C. Hutchinson) D. 327.
Guadarrama (F. Eckinger) D. 327.
——Staten Island (N. Y.) electrification (D), 378.
——Substation, Italian State, rectifier, *906.
——Substation system, centralized supervision of automatic (R. J. Wensley), *1259.
——Swiss Federal, electrification (D), 79, 950.
——Train control, multiple-unit (L. Mandich and P. Sztrókay) D. 911.
——Trolley omnibus, new electric (D), 759.
——Virginia, starts electric operation (D), 911.

Ranges (see also Commercial activities):
——Apartment hotel installs 260, p. *755.
——Inexpensive, shown to be, 958.
——Load, building an (H. J. Gille), 471.
——Load curve, effect on, 523.
——Northwest, survey, *706.
——Serviced at net cost of 40c per call, 704.
——Servicing and complaint costs, 323.
——Tomorrow's users must be made today (editorial comment), 54.

Rates:
——Baltimore company extends its four-cent, 665.
——Base value, 289.
——Boston, ordered reduced, 283.
——Canada, Toronto power, 282.
——Commissions' decisions, a lesson from (editorial comment), 399.
——Company may promulgate, when commission fails to fix them, 36.
——Comparison of, 238.
——Confiscatory, fixed by statute, 1228.
——Costs of service need accurate analysis (editorial comment), 987.
——Deductions from valuation must not affect unfairly, 717.
——Demand charge, determining (W. J. Greene), 947.
——Employees about rate cases, telling (editorial comment), 205.
——Experimental, cannot be deemed unreasonable, 717.
——Fair return and "the Massachusetts rule," 717.
——Fixed by commission, burden of proof that they are unfair rests on company, 1175.
——Fixing, police power of state and (Missouri), 289.
——Flat, superseded by demand charge on two bases, 971.
——Forcing underground construction justifies higher, 922.
——Franchise, fixed prior to creation of commission, 871.
——Increase of, named in contract upset, 1175.
——Massachusetts decisions, two (editorial comment), 301.
——Municipal plant earnings, 387.
——Municipality authorized to raise and equalize, 90.
——New York Edison, case, 185.
——New York State, cut, 1273.
——Old, cannot be continued in new contract without investigation, 141.
——Portland (Oregon) new power, 427.
——Potomac Electric Power will cut, 1273.
——Preferential, secured by contract, 1073.
——Reduction of, petition for, 1329.
——Refrigeration, Utah company establishes domestic, 276.
——Regulated on reasonable ability of consumers to pay as well as on return to company, 191.
——Residential, should encourage use (editorial comment), 550.
——Residential, that encourage use (C. L. Campbell), *1249.
——Rural electric service losses considered in, structure, 191.
——San Francisco asks reduction, 133.
——Service and, inseparably associated, 141.
——Simpler and clearer, 665.
——Standby electric, 922.
——Stock market quotations and public utility (editorial comment), 203.
——Structure for electric, a uniform (Philip Chapin Jones), *1008.
——Sweden, rural rates in, 162.
——Temporary, fixed by court not an infringement on jurisdiction of commission, 1073.
——Uniform, versus business-getting (editorial comment), 1089.
——Uniformity, principle of, 337.
——Zone, to encourage new business, *704.

Records:
——Celluloid as a substitute for tracing cloth, 320.
——Customers', system (Malcolm Barton), *514.
——Distribution system, *272.
——Graph assists load dispatchers (C. P. Coney), *371.
——Industrial load census, value of (F. M. Weller), *1051.
——Load check, graphic, *419.
——Machine attachments, diagrams for locating, *701.
——Meter:
System (W. L. Carr), *567.
Tests, of (Stanley Green), *702.
——System indicator board (H. H. Rugg), *804.
——System performance (editorial comment), 1242.
——Transformers, charts for regulation of (Arthur A. Boelsterli) D. 424.
——Transformer, handling instrument (Karl H. Bausman), *1212.
——Transmission line:
Diagram, constant potential (Frank G. Baum), *409.
Progress chart for, *570.

Rectifiers:
——Development (D), 473.
——Mercury-arc:
Parallel operation (E. Kern) D. 130.
Plants' influence upon telephone lines (A. Zastrow and E. R. Benda) D. 1013.
Railway, plant (C. Brynhildsen) D. 1012.
Rolling mill, plant in (W. Zimmerman) D. 809.
Substations in Vienna, Austria (E. Gebauer) D. 959.
——Nos. III-VI (D), 707.
——Review of (D), 910, 1115.
——Thermionic (D), 1062.

Refrigerators and refrigeration (see also Commercial activities):
——Absorption, *1161.
——Air refrigeration in large buildings, (editorial comment), 1140.
——Central stations merchandise, should (Winston Paul), 111, comment (C. W. Ridinger), 269.
——Icemen take common-sense view of, situation (editorial comment), 1090.
——Salesmen should not belittle competitive refrigerants (editorial comment), 253.
——Service costs, 24, *860.
——User can be made an electric service "prospect," how every (editorial comment), 937.
——Utilities' part in selling (H. E. Young), 896.

Regulators:
——Induction, in feeder circuits (Laurence H. A. Carr) D. 861.
——Rewinding, to change phase, *270.

Relays:
——Automatic network (John S. Parsons) D. 229.
——Distance, experience with the (Erich Gross) D. 1319.
——Maintenance practice (W. D. Wilkinson), *700.
——Meters used as reverse-current, 417.
——Phase-sequence protective (J. V. Breisky), *318.
——Power-house motors, protection for (Ralph Kelly) D. 910.
——Protection, differential, (P. Bary) D. 1011.
——Protective (J. Biermanns) D. 180.
——Transformer, connections (William S. Schmidt), *1057.

Reports, annual (see under Financial).

Research:
——Conductivity, nature of electrical (editorial comment), 2.
——"Electrical World's" department, 182, 328, 576, 810, 1064, 1268.
——High-voltage laboratories (J. Reyval) D. 78.
——Insulation (editorial comment), 53.
——Insulator, high-voltage (editorial comment), 255.
——National Academy of Sciences to raise fund, 1269.
——Power factor, research laboratory raises system, 1111.
——Radio, progress (editorial comment), 499.
——Scientific, is a necessary development, pure (editorial comment), 1192.
——Southern California Edison's electrical standardizing laboratory (W. R. Frampton), *411.
——Stanford laboratory, new (Andrew R. Boone), 745.

Resistor, the ballast (H. A. Jones) D. 229, 759.
Revenue, (see Financial and Statistics).

Rhode Island:
——Providence: Narragansett Electric Lighting Co.:
Smoke abatement, 222.

Röentgen rays:
——Development of, tubes (William D. Coolidge) D. 79.
——Steel castings and (Ancel St. John) D. 1012.
——Steel castings, examination of (I. E. Moultrop and E. W. Norris) D. 525.
——Uses of, practical (editorial comment), 501.

Rubber, electrodeposition of (S. E. Sheppard and L. W. Eberlin) D. 708.

Rural electric service:
——(Robert H. Rogers) D. 808.
——Alabama Power Company, 179.
——American Farm Bureau Federation on, Young addresses, 1221.
——American Society of Agricultural Engineers, 32.
——Brooders, tests of electric, 858.
——Farm lighting plants (W. Kraus and H. Löwl) D. 327.
——Farmer, educating the (editorial comment), 550.
——Great Britain (D), 526, 708, 1063, 1252.
——Milking, unit consumptions for electric, 422.
——Motors for, induction (L. Riefstahl) D. 1042.
——Ontario, in (L. W. W. Morrow), *790.
——Plowing by electricity (editorial comment), 254.
——South Dakota line, sales methods develop Renner, *1162.
——State project directors meet, 32.
——Swedish, 162.

*Indicates illustrated articles

Rural electric service (Cont.):
——Swiss farms (F. Ringwald) D, 278.
——Texas, 1067.
——Transmission requirements for farm machinery, 370.
——Wisconsin, 523, 528, 706.
Russia:
——Georgia, water power or mineral oil in (Henry L. Geissel), 465.
Rustproofing, recent development in (L. F. Hirsch), 322.

S

Safety (see Accident prevention).
St. Louis (see Missouri).
San Francisco (see California).
San Joaquin (see California).
Searchlights, towers for carrying, *225.
Seattle (see Washington).
Securities (see Financial).
Service line extension profits, forcasting (W. A. Forbush), 453.
Ships:
——Electrical engineer in the merchant marine, the (G. A. Pierce) D, 327.
——Ferryboats, application of electric propulsion to double-ended (A. Kennedy, Jr. and Frank V. Smith) D, 1116.
——Propulsion, electric (Charles Rettie) D, 708.
Short-circuits:
——Calculating board (E. R. Stauffacher), *223.
——Calculating table (S. Murray Jones), *847.
——Generators, investigations on (H. Rikli) D, 129.
——Ground currents on three-phase power networks, using the method of symmetrical co-ordinates, calculations of (Sadatoshi Bekku) D, 424.
——Single-phase and polyphase, current, calculation of (F. Ollendorff) D, 78.
——Single-phase, calculations (W. W. Lewis) D, 424.
——Synchronous machines:
Currents in (R. F. Franklin) D, 574.
Initial and sustained, in (Vladimir Karapetoff) D, 424.
Shovels:
——Electric (D. J. Shelton and D. Stoetzel) D, 708.
——Steam and electric, in open mine excavation (D), 1116.
Shows, electrical:
——New York City, 866, editorial comment, 835.
——Wheels on, *908.
Signaling and signals:
——Burglar alarm with wood as part of the circuit (W. Blut) D, 79.
——Fuel saving and (B. J. Schwendt) D, 280.
——Railroad crossing, in New York State, 1300.
——Railway, operated by windmill, *1004.
——Rupture of pump service fuses operates (W. G. Shurgar), *322.
——Street, electric through-, *1054.
——Time, optical (I. Wiligut) D, 1217.
——Traffic, utility companies as consultants on electric (editorial comment), 401.
——Transformers, for (R. Diacon) D, 861.
Signs, electric:
——Eiffel Tower, France, carries advertising, *582.
——Forms, characteristics and designs (C. A. Atherton) D, 1267.
——Higher intensity lighting for, *226.
——Industrial (editorial comment), 449.
——Lighting, electric (A. Curchoo) D, 1320.
——Los Angeles' gigantic, *51.
Silica, mechanical, thermal and optical properties of fused (Elihu Thomson) D, 1012.
Silit (D), 1063.
Simplification and standardization (editorial comment), 886.
Society for Electrical Developments:
——Christmas tree, national, 813.
Societies (see Associations, also individual names of associations and societies).
South, the:
——Harbingers of prosperity (editorial comment), 987.
——Industrial load of, 1256, (editorial comment), 1241.
——Power in, continued rainfall brings normal, 1014.
Southern California Edison Co. (see Calif.).
Southern Power Co. (see North Carolina).
Spain:
——Electrification: Ferrocarrils de Cataluna y Sarria (H. C. Hutchinson) D, 327.
——Guadarrama railway (F. Eckinger) D, 327.
——Water power utilization, 220.
Standardization (see also Standards):
——Homes, in wiring and lighting (editorial comment), 551.
——Movement, nation's industries support, 136.
——Simplification and (editorial comment), 886.
Standards (see also Standardization):
——American Engineering Committee, water power rating, 233.
——Bureau of, annual report, 1171.
Standards (Cont.):
——Photometric, illuminating engineering nomenclature and (D), 708.
Starters (see Motor control).
Stations, generating (see Generating stations).
Stations, hydro-electric (see Hydro-electric plants).
Stations, sub- (see Substations).
Statistics:
——Advertising, cost of public utility, 23.
——Building construction, *732, *872.
——Business conditions, barometer of electrical, June, 1925, *170, July, *510, August, *698, September, *891, October *1101, November *1308.
——Canada, central-station industry of, 1322.
——Central station:
Additions and extensions to generation and distribution systems, *252.
Argentina, 996.
Atlantic States, energy generated in Middle and South, *985.
Building construction and, industries, *732.
Canada, 1322.
Capitalization, 1920 to 1930, *349.
Coal burning stations, operating costs, and performance data on, *633.
Construction expenditures, 1925, p. 1048.
"Coverage," *51.
Customers, domestic lighting, *497.
Customers in 1923, 1924 and 1925, p. 68, editorial comment, 53.
Energy generated, 1912 to 1930, *498.
Energy generated, first half of 1923, 1924 and 1925 p. *600.
Energy generated, 1925, April, *9, May, *212, June, *461, July, *697, August, *949, September, *1147, October, *1307.
Energy generated, first half of 1925, *461.
Energy generated in the Mountain and Pacific States, *833.
Energy generated in New England, *1291.
Expenditures for additions and extensions, 1925, p. *1190.
Generator rating, a.c. and d.c., *350.
Generator rating and growth, *52.
Generator rating, 95 systems of more than 50,000 kva., 262.
Hydro development in 1924, p. 462.
Load, evolution of the, *1087.
1930, electrical industry in (Charles E. Neal), 368.
North Central States, energy generated in, *1088.
Ohio has a million consumers, 30.
Operating and maintenance expenses, April, *9, May, *212, June, *461, July, *697, August, *949, September, *1147, October, *1307.
Operating and maintenance expenses, first half of 1925, *461.
Output: is this a world's record? (C. J. W.), 1055.
Prime mover rating, 314.
Revenue, gross, April, *9, May, *212, June, *461, July, *697, August, *949, September, *1147, October, *1307.
Revenue, gross, first half of 1925, *461.
South Central States, energy generated in, *1189.
Taxes in 1913 and 1923, p. *599.
——Census to include questions on industrial heating, 964.
——Collection of, National Distribution Conference on systematic, 1278.
——Competition and (editorial comment), 1141.
——Copper used in electrical manufacture, *153.
——Cost of lighting versus cost of living, *986.
——Economic position of the United States and the world, *251.
——Engine and waterwheel production, 821.
——French electrical development, business side of, 110.
——Generator rating, 95 systems of more than 50,000 kva., 262.
——Industrial load:
Middle Atlantic states, 744.
New England, 512.
North Central states, 1002.
South, of the, 1256, (editorial comment), 1241.
——Industries, New England, *731.
——Japan's electrical development, 232.
——Metals consumption, 240.
——Middle Atlantic states, industrial load of, 744.
——1925, a year of new records (editorial comment), 447.
——1930, electrical industry in (Charles E. Neal), 368.
——Outlets are in prospect, 400,000,000 (M. Luckiesh), *851, (editorial comment), 836.
——Responsibilities in smaller companies (editorial comment), 1140.
——South, industrial load of the, 1256 (editorial comment), 1256.
——Trade association, 972.
——Vacuum cleaner sales, *771.
——Wages, 1914-1924, p. *154.
——Washing machine industry, 390, *972.
Statistics (Cont.):
——Waterpower development, 1921, 1924 and 1925, p. 462, p. *834.
——Water power of the world, 217, *1292.
——World market for electrical goods (Hugh Quigley) D, 26.
Steam (see also Boilers, Condensers, Generating stations, etc.):
——Desuperheating, for reciprocating engines (W. G. Shurgar), 272.
——Power plant design, what is ahead in (B. N. Broido), *623.
——Superheated at high pressures, total heat of (H. L. Callendar) D, 326.
——Water power and (Sten Velander) D, 861.
Steel (see also Mills):
——Association of Iron and Steel Electrical Engineers' convention, 578.
——Castings and X-rays (Ancel St. John) D, 1012.
——Iron ore, direct from (Henning Flodin) D, 1166.
——Mills:
Blooming-mill drive (Rogers A. Fiske) D, 1062.
Europe, rolling-mill drives in Continental (O. Needham) D, 474.
Foreign practice (W. H. Burr and F. L. Estep) D, 474.
Motors in, electric (D), 181.
Rectifier plant in rolling, large (W. Zimmerman) D, 809.
Rolling, electrical drive for (H. C. Uhl) D, 474.
Rolling-mill drive with three-phase motors (M. Danbon and R. Jung) D, 575.
——Production, electric furnaces raise, 370.
——Treating, American Society for, convention, 664.
——X-ray examination of castings (I. E. Moultrop and E. W. Norris) D, 525.
Stocks (see Financial).
Stone & Webster (see Financial).
Substations:
——Automatic:
Bibliography (D), 229.
Germany, in (Joseph Roubicek), *801.
Melbourne, Australia, railway system's (R. M. Harvey) D, 280.
Railway signaling and train control, for (H. M. Jacobs) D, 759.
San Joaquin Light & Power Corporation's experience (E. K. Sadler), *173.
Supervision of system, centralized (R. J. Wensley), *1259.
——Buses, taping (E. C. Lindsay), 69.
——Detroit Edison Company's switching station built in a day, 333.
——Economic spacing and size of (Everett L. Sweet), *1200.
——France, 220-kv. installation (P. Quoirez) D, 1319.
——Jugoslavia, Tuffer (W. Grob) D, 758.
——Oil filter, portable, *222.
——Outdoor:
Australia, in (F. W. H. Wheadon), *466.
Inexpensive (G. A. Iler), *519.
Pacific Gas & Electric's Vaca-Dixon, *569.
Pipe inserts in concrete foundations, installing (E. J. Amberg), *419, comment, (C. Otto von Dannenberg), *566.
Practice (D), 279.
Semi-automatic, *855.
Standardization, *938.
——Rectifier:
Italian State Railways, 906.
Vienna, Austria, in (E. Gebauer) D, 959.
——Superpower and the industrial customer's (editorial comment), 886.
——Switchboards, concrete walls used for, *1261.
——Switzerland, open-air, 9.
Superpower:
——Italy (D), 25.
——Japan, in (Minoru Fukuda) D, 574.
——Substation, and the industrial customer's (editorial comment), 886.
Sweden:
——Export industries in, electric and other machine-manufacturing (Axel F. Enström) D, 1166.
——Rural rates, 162.
——Telephone cable from Stockholm to Gothenburg, underground (A. M. Anderson) D, 1166.
Switchboards, concrete walls used for substation, *1261.
Switches:
——Air-break, essential qualities in (J. E. Reynolds), *1209.
——Fuse, preliminary tests on new rechargeable, *1004.
——Fuses, accessible service (P. H. Bartlett), 747.
——Oil (see circuit-breakers, oil).
——Pole-top, tests, *903.
——Safety service-entrance, sealing, 945.
Switzerland:
——Railways, electrification of (D), 79, 950.
——Rural electric service (F. Ringwald) D, 278.
——Substations, open-air, 9.

*Indicates illustrated articles

T

Tacoma (see Washington).
Telegraphy:
——Cable, the loaded submarine (editorial comment), 353.
——Ocean cable transmission (L. E. Dunham), 269.
Telephony (see also Radio):
——Cable, submarine (P. Craemer and E. Muller) D, 1217.
——Echo suppressors for long circuits (A. B. Clark and R. C. Mathes) D, 230.
——New York-Chicago cable, 430.
——Railway feeder and telephone lines, suppression of interference between (W. Schuler) D, 960.
——Receiver impedance (E. Z. Stowell) D, 280.
——Receivers for loud-speaking purposes, design of (C. R. Hanna) D, 862.
——Rectifier plants' influence upon, lines (A. Zastrow and E. R. Benda) D, 1013.
——Repeater stations, modern (A. B. Hart) D, 960.
——Sweden, underground cable from Stockholm to Gothenburg in (A. M. Andersson D, 1166.
——Sound recording (F. Trendelenburg) D, 327.
——Telephotograph addel to commercial communication facilities, 308.
——Transmission line, some artificial lines and networks associated with the uniform (D), 280.
——Transmission unit (F. B. Jewett) D, 79.
Temperature:
——Regulation by means of thermionic valves (editorial comment), 937.
——Regulation with electron tubes (W. Taeger) D, 181.
Tennessee:
——Electric Power Company's service not curtailed during drought, 916.
——Hydro-electric developments, 966, 1269.
——Memphis Power & Light Company's distribution records, *272.
——River, public ownership proposed for upper, 1170.
——Tax on electric goods held illegal, 291.
——Tennessee, Clinch and Powell Rivers, permits, 966.
Testing and tests:
——American Society for, materials (see under American).
——Cable:
150,000-volt (A. M. Taylor) D, 229.
Methods (F. M. Farmer), 20.
——CO_2 recorders (J. F. Barkley) D, 180.
——Engines by the heat balance method, testing (Eugene Ogur) D, 229.
——Flatirons, caloric and electric tests on (K. Backhaus) D, 378.
——Insulators, locating defective (George A. Ilier), *257.
——Meter:
Board, and instrument (Colborn E. Blaisdell), *856.
Periodic (Karl H. Bausman), *1260.
Record of, semi-graphic (Stanley Green), *702.
——Oil, method (V. D. Heyden and Tyke) D, 808.
——Porcelain, porosity of (R. Pfeiffer) D, 377.
——Southern California Edison's, laboratory (W. R. Frampton), *304, *411.
——Switch, pole-top, *903.
——Turbines, code for steam (D), 707.
Texas:
——Capital, floodlighting the dome of the, *432.
——Gas, power from Panhandle, 1120.
——Rural electrification, 1067.
Tools on hand lines, improved fastening of, *370.
Towers (see Transmission).
Traction (see Railways).
Trade activities (see Manufacturing and markets).
Trade literature, new, 43, 97, 147, 197, 244, 295, 343, 393, 441, 489, 541, 591, 675, 723, 775, 825, 877, 928, 977, 1028, 1079, 1131, 1181, 1234, 1283, 1335.
Trade relations and public relations (editorial comment) 303.
Transformers:
——Coils, prolonging life of (Edmund J. Henke), 122.
——Cooled by air jets (L. H. Burnham), 703.
——Cooling system (R. M. Peabody), *70.
——Design progress (J. F. Müller) D, 180.
——Dimensions and output, relation between (F. J. Teago) D), 25.
——Full-load tap changing on (Ch. Krämer) D, 129.
——Grounding of the neutral in three-phase, with siren in the grounding circuit (Fritz Jacobbsen) D, 525.
——Grouping, to help voltage regulation (Charles R. Schuler), *1210.
——Hook-up, compact (George D. Barr), *1314.
——Loading, on a temperature basis (E. G. Reed and W. A. Sumner) D, 1217.
——Moving, in winter, *955.
——Oil purification plant on wheels (A. H. Nicholson), *567.
——Polyphase, magnetizing-current wave forms (P. Kemp and H. P. Young) D, 910.
Transformers (Cont.):
——Problems (M. Vidmar) D, 808.
——Ratio without interrupting the load, changing (M. H. Bates) D, 1266.
——Reactances, A. I. E. E. on, *19.
——Regulation of, charts for (Arthur A. Boelsterli) D, 424.
——Relay connections (William S. Schmidt), *1057.
——Self-cooled, ventilation for (T. C. Lennox) 569.
——Signaling apparatus for (R. Diacon) D, 861.
——Stations of Hydro-Electric Power Commission of Ontario, Toronto outdoor, *552.
——Structure, practical and economical, *903.
——Substations in Australia (F. W. H. Wheadon), *466.
——Synchronizing difficulties, overcoming (Richard McKay), *1111.
——Tap changing under load (Frank V. Smith), *270.
——Three-phase versus single-phase (K. Lubowsky) D, 1216.
——Two-phase to six-phase, connection of one hundred per cent apparatus economy (A. Boyajian) D, 229.
——Windings, separate leakage reactance of (O. G. C. Dahl) D, 326.
Transmission:
——Alabama Power Company's, plans, 710.
——Australia, practice in (F. W. H. Wheadon), *1159.
——Bavaria (A. Menge) D, 25.
——Bird guards prevent flashovers on 130-kv. line, *1058.
——Calculations (R. G. Hornberger), *120.
——Cathode rays for high frequency oscillographs (Harald Norinder) D, 910.
——Characteristics, mechanical (L. E. Imlay) D, 326, 808, 861, 910.
——Circle diagram for long lines (Percy H. Thomas), *899, correction, 994.
——Circuit faults, locating (S. Aronoff), *1041.
——Conductors in, splitting of conductors (L. E. Mash Killeison) D, 25.
——Constant potential, diagram (Frank G. Baum), *409.
——Corona investigation on artificial line (Murray F. Gardner) D, 525.
——Detroit Edison's 120,000-volt, *1296.
——Developments and service standards (editorial comment), 302.
——Direct-current, high-tension (editorial comment), 1193.
——Earth potentials of alternating-current systems, regulation of (T. R. Warren) D, 1062.
——France, costs in, 1314.
——France, in, *82.
——Frequency, advantages of operating at a standard (editorial comment), 401.
——Georgia 110,000-volt line, Toccoa-Augusta, 814, 1170.
——Heavisidion, the instant (Vladimir Karapetoff) D, 1062.
——High-tension conference at Paris, international, 451.
——Interconnection:
Benefits of, popular (Samuel Ferguson), *619.
Byproduct of, a (editorial Comment), 1140.
Concentrations of power on, handling (editorial comment), 399.
Consumers' Power Companys' system (Allen M. Perry), *604, *652, *693, editorial comment, 683.
Continuity of service in (editorial comment), 447.
Distribution from, savings in (editorial comment), 400.
Feeder trouble, helpful in clearing (editorial comment), 1295.
Gold bricks and (editorial comment), 887.
Low-grade (editorial comment), 448.
Operation, basis for (editorial comment), 1295.
Oregon companies, by, 133.
Sacramento-Merced (California), 814.
System reserves, and (editorial comment), 989.
Utility and industrial plants, between (editorial comment), 785.
——Intermediate, relaying of power by (editorial comment), 1139.
——Interruptions and causes, *1210.
——Italy: Proposed 130-kv. lines across Straits of Messina, 1258.
——Klydonograph, *17.
——Losses and low power factor (P. C. Shults), *175.
——Mechanical energy in, stored (J. P. Jollyman) D, 861.
——Mississippi River crossing of Crystal City line (H. W. Eales and E. Ettlinger) D, 1115.
——Montana 66-kv. line uses original insulators, *1007.
——Network stability next in order (editorial comment), 1039.
——110-kv. California, wood poles used in, *1313.
——110-kv. line erected in Toronto city streets, *1092.
——Osborne (Adelaide, Australia) D, 758.
——Over-voltage due to dropping of load (E. J. Burnham) D, 180, 326.
Transmission (Cont.):
——Performance records, system (editorial comment), 1242.
——Power limits of, fundamental considerations of (R. E. Doherty and H. H. Dewey) D, 1062.
——Pre-equipment with data as an aid to quick decisions (editorial comment), 105.
——Progress chart for, 570.
——Problems (S. Q. Hayes) D, 758.
——Relay versus trunk-line power (editorial comment), 988.
——Reliability (J. Biermanns) D, 377.
——Southern California Edison Co.:
New, 427.
System (H. A. Barre) D, 180.
220,000-volt, and transients (R. J. C. Wood) D, 1165.
——Stability (C. L. Fortescue) D, 959.
——Stability, theory of (editorial comment), 681.
——Sleet, tests for melting (L. W. Wyss), *466.
——Storm areas, performance of, in (editorial comment), 1193.
——Tacoma, long span across the narrows at (J. V. Congwer and A. F. Darland) D, 1319.
——Three-phase lines, calculation and regulation of voltage on (O. I. Burger) D, 707.
——Towers:
Design (L. E. Imlay) D, 326, 808, 861.
Ground potentials in the vicinity of (editorial comment), 204.
Paint tests, results of preservative, 751.
Wind stresses on steel (H. Varlet) D, 1165.
——Transients and surges (editorial comment), 104.
——Underground cables, calculation of the electrical problems of, by (Donald M. Simons) D, 707.
——Vibration in cables, overcoming (G. H. Stockbridge), 1304, editorial comment, 1295.
——Voltage regulation of three-phase (H. Cotton) D, 377.
Transportation equipment, getting the maximum return from (J. H. Macbeth), *124.
Transverter, the (J. Härden) D, 474.
Trees, trimming shade (editorial comment), 936, comment (Frank W. Smith), 1157.
Tungsten:
——Arc characteristics, short-length (S. H. Anderson and G. G. Kretchmar) D, 425.
——Manufacture of pure (G. A. Percival) D, 378.
——Thermal expansion, 1148.
——Wires, chemical reduction of the diameter of (W. Samter) D, 960.
Turbines, gas (Lionel S. Marks and M. Danilov) D, 229.
Trucks, electric (see Vehicles):
Turbines, hydraulic:
——Alluvial matter in supplies, automatic eliminators for (D), 910, 959.
——European, design (F. Johnstone-Taylor) D, 525.
——High-head reaction-type, world's record (C. P. Dunn) D, 278.
——Holtwood, tests made on largest, at (Robert E. Turner) D, 1115.
——Low-head propeller type (G. Troeltsch) D, 180.
——Portland Electric Power Company's Oak Grove high-head (Ely. C. Hutchinson) D, 229.
——Western hydro-electric practice, present trends in (Ely C. Hutchinson), *615.
Turbines, steam:
——Blading design and manufacture (L. L. Smith) D.
——Development (Hans Dahlstrand) D, 959.
——"Erate Brünner" (E. A. Kraft) D, 473.
——High-back-pressure, as applied to existing stations (Hans Dahlstrand) D, 229.
——Operating performance, basis for judging (James F. Brown), *1262.
——Resuperheating in, increase in thermal efficiency due to (W. E. Blowney and G. B. Warren) D, 326, 424, 808.
——Steam bleeding and turbine performance (C. D. Zimmerman) D, 1319.
——Superheating, intermediate (Kurt Thielsch) D, 1266.
——Test code for (D), 707.
——Weymouth stations (D), 861.
Turbo-alternators, Gennevilliers three-phase, 60,000-kva. (E. Roth) D, 758.
Turbo-generators:
——A.C., measurements of electrical output of large (Everett S. Lee) D, 574.
——High-speed (K. Thieltsch) D, 574.
——Measurement of electrical output of large a.c., during water-rate tests (Everett S. Lee) D, 1165.

U

Ultraviolet radiations (editorial comment), 887.
United States Government (see also Federal Power Commission: Standards, Bureau of etc.):
——Army's survey of power resources, 1223.
——Census of Manufactures to include questions on industrial heating, 964.

*Indicates illustrated articles

United States Government (Cont.):
——Commerce, Department of:
Hoover addresses A.S.M.E. convention, 1167.
Hoover on eleminating waste, 1171, editorial comment, 1139.
Hoover's observations on Niagara Falls, 382.
Philadelphia, market analysis of, 587.
Simplified practice program, 536.
——Congress, the sixty-ninth (editorial comment), 1191.
——Federal control of utilities, Hoover opposes, 815, editorial comment, 783.
——Geological Survey:
American Engineering Council for water-resource survey by, 1118.
Colorado River survey, 912.
Water resources work, 478.
——I. C. C. over utilities, bill to extend jurisdiction of, 1321.
——Patent Office improvement, 478.
Underground construction (see Distribution and Transmission).
Utah:
——Logan municipal plant, 477, 582.

V

Vacuum tubes (see Radio, tubes).
Valuation (see Commission regulation, Court decisions and Rates).
Vehicles, electric:
——French (T. Pausert) D, 79.
——Tractors:
Process work, in (Harold J. Payne) D, 575.
San Diego company uses, with trailers, *751.
Tannery, in (C. B. Adams), *521.
——Trucks, industrial:
Process work, in (Harold J. Payne) D, 575.
——Trucks, street:
Cincinnati, in, *859.
Developing business, aids to, 1061.
Economies (H. S. Meyer) D, *809.
Experience with, 275.
How much should be spent to sell a (editorial comment), 254.
Keeping them sold (L. F. Boerner), 555.
Minnesota tax a handicap for (H. S. Greiner), 517.
Richmond (Va.), installation, 325.
User's appraisal of, a (Lester M. Branch), *415.
Vessels (see Ships).
Virginia:
——Culpeper votes down municipal plant, 529.
——Exmore Light & Power Company, Fitkin buys, 1323.
——Halifax Power company expands, 530.
——Hydro-electric development, 332.
——Public Utilities Association convention, 1170.
——Railway & Power Company expansion plans, 865.
——Western Power Company, Fitkin interests buy, 27.
Voltage regulator, new (G. Picker) D, 1216.
Voltage regulator settings, calculation of (Verne V. Gunsollen), 520.

W

Washington City (see District of Columbia):
Washington, State of:
——Chelan River hydro-electric project, 479, 964.
Washington, State of (Cont.):
——Cities ask to sell power outside limit, 1068.
——Cowlitz River projects, 330, 1273.
——Electric power in, *1194.
——Long-Bell Lumber Company's plant, illuminating, *135.
——Pulp & Paper Company's plant, electric drive (O. C. Cordes and B. L. Kerns), *1142.
——Puget Sound Power & Light Co.:
Baker River plant, 477, 1068.
Expansion (Paul Willard Garrett), *544.
Olympic Peninsula activities, 1323.
Seattle from extraterritorial sales, enjoins, 812.
Territory, adds to, 1121.
——Seattle:
Extraterritorial sales, enjoined from, 812.
Skagit Engineering Commission, 1171.
Skagit plant, 186, 1069.
——Tacoma, long span across the narrows at (J. V. Congwer and A. F. Darland) D, 1319.
——Water Power Co.:
Chelan River, 479, 964.
Developments, *1170.
Nine-mile hydro-electric power plant, buys, 577.
——Western, hydro plants in, 1273.
Water:
——Electrolysis of, under high pressure (editorial comment), 500.
——Heating, energy consumption and cost of electric, 275.
——Purification of, electro-osmotic (E. Mayer) D, 1217.
Water power (see also Hydro-electric developments):
——Development in 1924, p. 462.
——Fuel power and (editorial comment), 603.
——Geological Survey's water resources work, 478.
——Hawaii, 408.
——Jugoslavia, in, 171.
——Lake and river regulations upon neighboring industrial regions, the influence of (Carl Kristofferson) D, 526.
——Maine approves Fundy plan, 577.
——Maine's proposed tidal power, 380.
——Menominee River, shortage on, 330.
——Norway, *4 (Ove Collett) D, 1216.
——Rating of rivers, committee to standardize, 233.
——Russia, in Georgia (Henry L. Geissel), 465.
——Southern Appalachian conference on power development, 764.
——Southern Power curtails service, 426.
——Spain, 220.
——Steam power and (Sten Velander) D, 861.
——Survey of resources, proposed, 664.
——West Virginia, bill, 1066.
——World's, developed, 217.
——World's resources (D), 78.
Waterwheels (see Turbines, hydraulic).
Welding:
——American Welding Society convention, 430.
——Arc, in manufacture and construction, (editorial comment), 1141.
——Automatic, results of (J. T. Porter) D, 181.
——Rail (D), 26.
——Spot and seam (J. Sauer) D, 1216.
——Spot-, machine (M. Curstädt) D, 526
——Steam mains, applied to, *904.

*Indicates illustrated articles

West, the:
——Chamber of Commerce discusses hydro-electric power situation, Western Division of, *1221.
——Hydro-electric practice, present trends in (Ely C. Hutchinson), *614.
——Municipal ownership checked (editorial comment), 53.
——Northwest, electric power in the, *1194.
——Surplus energy on the Pacific Coast, disposing of (editorial comment), 103.
West Virginia:
——Appalachian Power Company's joint use of frequency changer (G. L. Furr), *1049.
——Codes, cities adopt, 1059.
——Public Utilities Association Convention, 1018.
——Water power bill, 1066.
Western Association of Electrical Inspectors, annual meeting, 1324.
Wilson Dam (see Muscle Shoals under Hydro-electric developments).
Winchester, Albert Edward—an appreciation (F. A. Wardlaw), 171.
Wire:
——Copper conductors for heavy overloads, dimensions of (R. Edler) D, 78.
——Galvanizing, new process of, *121.
——Resistances of fine, at various temperatures, simultaneous high-frequency and direct-current (J. D. Stranathan) D, 1166.
——Tungsten, chemical reduction of the diameter of (W. Samter) D, 960.
Wireless (see Radio).
Wiring (see also Wire):
——Home, standardization of (editorial comment), 551.
——Outlets are in prospect, 400,000,000 (M. Luckiesh), *851, editorial comment, 836.
Wisconsin:
——Expansion in, 231, *381.
——Flambeau reservoir, 1271.
——Gas & Electric Company wins suit, 709.
——Milwaukee Electric Railway & Light Company, Lakeside plant fuel economy, 329.
——Public Service Corporation's:
Byllesby interests buys, 134, 234, editorial comment, 203.
Green Bay station, 1117.
——Superior Water, Light & Power Company bought by American Power & Light, 475.
——Utilities Association:
Commercial Section meeting, 1017.
Electric Section meeting, 431, 528.
——Utilities settle disagreement, 916.
Wood poles (see Poles):
World Power Conference:
——Constitution, proposed, 475.
——International executive committee meeting, 379.
——Journal, quarterly, 426.
Wyoming:
——Utility Association's annual convention, 1067.

X

X-rays (see Röentgen rays).

AUTHOR INDEX

A

ABBOTT, W. L. Crawford Avenue station, *113.
Adams, C. B. Electric tractor saves $3,442.70 per year in tannery, *521.
Alden, Vern E. Operating performances of steam-generating stations, *633.
Amberg, E. J. Installing pipe inserts in concrete foundations, *419.
Anderson, John W. Control for dual-driven circulating pumps, *1006.
——Synchronous motors for dual-driven circulating pumps, *954.
Arnold, F. Eliminating "cloudy finish" by electric baking, 172.
Aronoff, S. Locating circuit faults, *1041.
Atkinson, R. W. Insulation power factor too low, 21.
Auchinloss, John. Determining the sequence of phases, *420.
——Methods of synchronizing alternating-current machines, *905.
Authenreith, A. J. Manufactured ice—an opportunity, *797.
——Utilities and the ice business, *844, editorial comment, 836, comment (Harrison D. Panton), 950.
Ayres, Colonel L. P. Barometer for financing, *829.
——Opportunities for the small manufacturer, 770.

B

BANCKER, W. F. Conservation of pole timber, *1127.
Bankus, John. Synchronous condenser drives railway generator, *803.
Barr, George D. Compact transformer hook-up, 1314.
Bartlett, P. H. Experience with accessible service fuses, *747.
Barton, Malcolm. Improved customers' record system, *514.
Bates, Ford. Electric heat in Omaha steel works, *417.
——Modern laundry electrification, *226.
Baum, Frank G. Constant potential transmission line diagram, *409.
Bausman, Karl H. Methods that expedite meter work, *1093.
——Handling instrument transformer records, *1212.
——Periodic meter testing, *1260.
Blaisdell, Colborn E. Meter and instrument test board, *856.
Blakeslee, D. W. Placing the brackets in the home, 171.
Beadle, J. B. Airplane speeds up power surveys, *311.
Beckett, E. J. Widening savings-bank investment field, 1032.
Boerner, L. F. Keeping the electric track sold, 555.
Boone, Andrew R. New Stanford laboratory, *745.
Boyd, William S. More effective electrical inspection, 1176.
Bozell, Harold V. Investment bankers' viewpoints, *778.
Branch, Lester M. A user's appraisal of electric trucking, *415.
Breisky, J. V. Use of phase-sequence protective relay, *318.
Broadhead, A. P. Prevention of damage from anchor ice, 1108.
Broido, B. N. What is ahead in power plant design, *623.
Brown, James F. Keeping a modern station up to date, *839.
——Basis for judging operating performance, *1262.
Brownell, Frank A. Dielectric losses in cables, *218.
Burnham, L. H. Transformer cooled by air jets, 703.

C

CAMPBELL, C. L. Residential rates that encourage use, *1249.
Cape, H. L. Power factor needs improvement in England, 699, comment (R. M. Longman), 1055.
Carr, W. L. Meter record system, *567.
Carroll, R. S. Water jacket saves moving subway, *1108.
Carter, R. N. Cost of pole setting by machine, *507.
Chase, P. H. Two-phase, five wire distribution, *63.
Clabaugh, Albert. Strip mine desirable load, *753.
Clark, H. A. Home-made side trim for meters, 753.
Clark, Lee Hinchman. Purifying circuit breaker oil, *562.
Clarke, D. D. Experience with lightning, 20.
Cloke, Paul. Resistance of copper at high temperature, *224.
Colby, H. S. Economic comparison of stoker and pulverized coal plants, *1301, editorial comment, 1294.
Coney, C. P. Graph assists load dispatches, *371.
Corbett, L. J. Radio interference analysis, 1109.
Cordes, O. C., and B. L. Kerns. Electric drive in a modern paper mill, *1142.
Courtright, H. H. Selling better kitchen lighting, *571.
Crawford, P. O. Construction details of Copco No. 2, *889.
Crellin, E. A. Pacific Gas & Electric Company's Pit River No. 3 plant (E. A. Crellin), *450, *455, editorial comment, 448.
Curran, L. V. Electric heating used to replace steam, 71.

D

DAHL, H. A. Special sale increases range load, *805.
Dale, F. A. Dix River hydro-electric development, *939.
Dalzell, D. R. Handling transil oil, 854.
Davidson, J. E. Neglected commercial opportunities, 413.
De Forest, C. W. Increased economy warrants increased investment, *605.
Dellmann, G. H. P. Street lighting from utility viewpoint, *1203.
Denny, C. W. Recent developments of foreign breakers, *122.
Devereaux, J. W. When a utility starts merchandising, *1059.
Dewey, F. S. Problems of developing a business barometer, 1208.
Dibble, Barry. Major Tyler's conclusions on Wilson Dam questioned, 1157.
Dittenhofer, E. N. Power-factor correction in hosiery mill, *365, Comment (Charles R. Underhill), 465, Comment (F. I. Hiss), 1055.
Ducey, W. J. Indication of energized circuits, *369.
Dunham, L. E. Ocean cable transmission, 269.
Dunsheath, P. Dielectric losses in cables, 220.
Dwyer, Roy C. Sectional committee for Electrical Safety Code parts 2 and 4, p. 69.

E

EDMONDS, G. P. Value and simplification of specialties, 240.
Ellsworth, B. E. Erecting 45 poles per day with 8 men, *71.
Eteson, F. C. Store lighting improved by window contests, *522.

F

FARMER, F. M. Cable-test methods arbitrary, 20.
Ferguson, Samuel. Popular benefits of interconnection, *619.
Finn, D. J. A lighting service department, *943.
Fixture Jobber. Fixture market requires stabilization, 535.
Forbush, W. A. Forecasting line extension profits, 453.
Forney, R. H. Removing scale from condenser tubes, 121.
Fountain, H. A. Financial structures compared, 493.
Frampton, W. R. Electrical standardizing laboratory, *411.
——Utility uses testing laboratory, *304.
Furr, G. L. Joint use of frequency changer, *1049.
Fynn, Val A. The Fynn motors and a predecessor, 317, Comment (K. L. Hansen), 416.

G

GARRETT, PAUL WILLARD. Adirondack tells story of its growth, *299.
——Alabama Power looks into the future, *201.
——Associated Gas & Electric expands, 445.
——Carolina Power & Light's unusual place, *347.
——Cities Service stock issue, 1237.
——Columbia Gas & Electric earnings go up, *1339.
——Consolidated Gas Company of New York, *1184.
——Details of new Insull holding company, *727.
——Detroit Edison's improved set-up, *1031.
——Engineer's Public Service Company, 100.
——General Gas & Electric recapitalizes, *46.
——Georgia Railway & Power's set-up, *1135.
——Lehigh Power Securities corporation, *931.
——Metropolitan Edison takes step ahead, *248.
——National Power & Light revamps set-up, *1083.
——New England Company's power system, *677.
——North American takes over Western Power, *595, *980.
——North American Edison's financing, 828.
——Northern States Power Company's growth, *1287.
Garrett, Paul Willard (Cont.):
——Puget Sound Power & Light's expansion, *544.
——Southeastern's new financial plan, *397.
——Toledo utility has had a good growth, *151.
——Utilities Power & Light Corporation, *880.
——World's largest electric producer, *980.
Gassaway, S. G. Economies of pumping oil electrically, *374.
Geissel, Henry L. Water power or mineral in Georgia?, 465.
George, B. J. Water-works construction offers 1,400-hp. load, 806.
Gilchrist, James M. Some problems of the sign business, 192.
Gilchrist, John F. Increasing revenue per dollar invested, *61.
Gille, H. J. Building an electric range load, 471.
Green, Stanley. Semi-graphic record of meter tests, *702.
Greene, W. J. Determining demand charge, 947.
Greiner, H. S. Minnesota tax on handicap for electric trucks, *517.
Gunsolley, Verne V. Calculation of voltage regulator settings, 520.

H

HALL, H. J. Electric carbonizing saves $115 per day, *1317.
Hansen, K. L. Unity-power-factor motor, 416.
Hansen, O. N. Use of reactive meters and graphs to determine power factor, *952.
Haushalter, F. L. Measuring effects of corona on rubber, *267.
Hawley, K. A. High-voltage insulator development, *360.
Heed, S. D. Profit on refrigerator sales, 789.
Henke, Edmund J. Prolonging life of transformer coils, 122.
Herstein, W. R. Electrical jobbers' margins, 37.
Hinners, F. E. Electric furnace replaces converter, *274.
Hirsch, L. F. A recent development in rust-proofing, 322.
Hirschfeld, C. F. Analysis of steam station design, *609.
Hiss, F. I. Overmotoring on polyphase circuits, 1055.
Horgan, J. G. Purchased power saves $15,000 in railroad shops, 907.
Holden, O. W. Street-lighting control for subway installations, *1056.
Hollister, V. L. Electric generating plant loads, *320.
Holmes, W. C. Combustion control at the Hudson Avenue station, *628.
Hornberger, R. G. Transmission line calculations, *120.
Hunter, R. B. Three-phase, four-wire, alternating-current low-voltage network, *565.
Huse, M. C. Industrial lighting in Philadelphia, *1153.
Hutchinson, Ely C. Present trends in Western hydro-electric practice, *614.

I

ICE MACHINE MANUFACTURER. Unbiased comparison of ice-plant drives, 264.
Iler, G. A. Inexpensive outdoor substation, *519.
——Locating defective insulators, *257.
——Operating a fully interconnected system, 853.
Insull, Martin J. Interpreting "big business" to the public, *261.
Irwin, K. M. Features of the Sioux City station, *684.
Ives, Clifford E. Utility companies as traffic signal consultants, 750.

J

JAMIESON, B. G. Isolation of phases in power houses, 220.
Jessop, F. W. Fractional-horsepower-motor market, 1074.
Jobber, A. Competition must be met, 192.
Jobber, Middle Western. Can the jobber serve the syndicate? 239.
Jones, Philip Chapin. A uniform structure for electric rates, *1008.
——Cost and prevention of low power factor, *316.
Jones, S. Murray. Short-circuit calculating table, *847.

K

KADE, FR. The compensated asynchronous motor in Europe, *120, correction, 465.
Kahlert, H. E. Electric cooking for institutions, *1213.

*Indicates illustrated articles

Keily, William E. Kw. or kva.? 368.
Kerns, B. L. (see O. C. Cordes).
King, J. E. Increased voltages for general supply of light and power, *997.
Kline, J. L. Over-extension of credit, 290.
Klingenberg, Dr. G. Station design in Germany, *652.
Konstantinowsky, Dr. K. Analysis of high-tension cables, *1102.

L

LANE, R. A. Study of power-factor correction, *803.
Lang, S. L. Electric heat helps produce high-grade brushes, *318.
Larson, R. H. Purchased power shows marked saving over private plant, 75.
Learned, John G. Electric heating in combination gas and electric utilities, 1001.
Lennox, T. C. Ventilation for self-cooled transformers, 569.
Lewis, Howard A. The jobber and his vocabulary, 1230.
Lincoln, E. S. The lump-sum bid, 923.
Lindsay, E. C. Taping sub-station buses, 69.
Lloyd, E. W. Public utilities need commercial men with vision, *557, editorial comment, 551.
Longman, R. M. Power-factor improvement, 1055.
Luckel, Frank. Naval experience in laying submarine cable, *1258.
Luckiesh, M. A billion dollar business available, *737, editorial comment, 733.
——400,000,000 outlets are in prospect, *851, editorial comment, 836.
——Good business in fixtures, *995, editorial comment, 989.
——More wattage in the home lights, *1105, editorial comment, 1091.
——Portable lamps as load builders, *1251, editorial comment, 1242.
Lundquist, R. A. The near-by Latin markets, 338, 388.

M

MACBETH, J. H. Getting the maximum return from transportation equipment, *124.
Martin, B. J. What load is off-peak?, *1316.
McGraw, F. W. Electric heat used for battery compound, 468.
McKay, C. The St. John development and the Canadian export tax on power, 69.
McKay, Richard. Overcoming synchronizing difficulties, *1111.
McKelway, G. H. Hold-off tags for feeders and cables, *123.
——Submarine conduit line, 752.
Miller, John T. Lighting Chicago's residential sections, *1309.
Miller, R. A. Accurate cost estimates facilitated, *319.
——Cost keeping for line construction, *73.
Mitten, G. R. Brickyard uses 1,000 hp. in motors, 126.
Moody, H. A. Steel forms used to build bus structures and cells, *1312.
Moore, Louis D. A bender for large pipe, *1314.
Morrow, L. W. W. Power factor in practice, *213, editorial comment, 204.
——Rural service in Ontario, *790.
Murray, Thomas E. Future trend of boiler plant design, 649.
Myers, R. D. Flood lighting visible for 25 miles, *470.

N

NANCE, W. E. One way to reduce trouble from wrong use of fuses, 465.
Nash, L. R. Requirements for a good utility security, 1107.
Neal, Charles E. Electrical industry in 1930, p. 368.
Nesselroth, S. Alabama Power's new office building, *1149.
Nicholson, A. H. Oil-purification plant on wheels, *567.

O

O'BRIEN, JOHN J. Byllesby executive on timely subjects, *161.
Observer. Reducing losses in pioneering, 91.
——Reducing machinery development costs, 973.
O'Moore, P. Analyzing utility construction costs, *168.
Orrok, George A. Law-temperature distillation and the central station.
O'Shaughnessy, M. M. The Hetch Hetchy power development, *206.

P

PACK, R. F. Jobber's future position and relation with power companies, *1151.
Panton, Harrison D. Electric utilities will not find ice business a gold mine, 950.
Paul, Winston. Should central stations merchandise electric refrigeration, 111. Comment (C. W. Ridinger), 269.
Peabody, R. M. Transformer cooling system, 70.
Penard, Thomas E. Analyzing bids for apparatus, 948.
Peryn, Allen M. Operating a fully interconnected system, *604, *657, *693, editorial comment, 683.
Poehlman, Frank H. Operating costs of Diesel plants, 21.
Power Salesman. Power for ice making, 902.

R

REBER, B. C. Modern illumination of railroad station, *1009.
Reed, N. J. Power—factor correction with synchronous motors, *467.
Refrigerator Manufacturer. Selling electric refrigeration, 1279.
Reutler, Julius. Protecting low-voltage generators, *953.
Reynolds, J. E. Essential qualities in air-break switch, *1209.
Ridinger, C. W. More thoughts on refrigeration merchandising, 269.
Robb, Marshall V. Selling a 300-hp. brickyard power load, *1253.
Rost, O. Fred. Trade policy of the electragists, *820.
Roth, C. H. Cost of making special apparatus, 39.
Roubicek, Joseph. Automatic substations in Germany, *801.
Rugg, H. H. System indicator board, *804.
Ryan, W. T. Spokane range sale adds $30,000 gross revenue, 126.

S

SACKETT, H. S. How pole consumer can benefit himself, *1245.
Sadler, E. K. Experience with automatic substations, *173.
Sanford, R. L. Detecting flaws by magnetic analysis, *309.
Schmidt, William S. Transformer relays connections, *1057.
Schuler, Charles R. Grouping transformers to help voltage regulation, *1210.
Seabury, George T. Advertising for professional engineering service, 566.
Seelye, Howard P. Economics of the distribution system, *107.
Shultz, P. C. Transmission losses and low power factor, *175.
Shurgar, W. G. Desuperheating steam for reciprocating engines, 272.
——Hastening oil filtering, 802.
——Method of handling boiler room labor, 703.
——Micrometer control for windbox damper, *369.
——Overcoming flue-gas sampling trouble, *418.
——Rugged furnace-wall construction, *520.
——Rupture of pump service fuses operates signal, *322.
Sindeband, M. L. and P. Sporn. Philo station sets record, *355, *403.
Sindorf, William J. Utility companies as traffic signal consultants, 750.
Singer, A. P. Suggestions for improving public relations, 511.
Sloan, M. S. Doing more than the law requires, 749.
Smith, Frank V. Transformer tap changing under load, *270.
Smith, Frank W. An appeal for the trees, 1157.
Smith, Fred I. Importance of incandescent lamp sales, *1045.
Smith, Robert I. An electrified hotel kitchen, *277.
Sporn, P. (see M. L. Sindeband).
Stahl, E. C. M. Economic system operation, *165.
Stauffacher, E. R. Short-circuit calculating board, *223.
Stockbridge, G. H. Overcoming vibration in transmission cables, *1304, editorial comment, 1295.
Stone, E. C. User's view of oil circuit breakers, *57.
Supply Manufacturer. Greater utilization of electric service, 1176.
Sweet, Everett L. Economic spacing and size of substation, *1200.
Switzer, F. G. Lock 18 development in Alabama, *795.

T

TEBERG, ERNEST J. Capitalizing floodlighted transmission towers, *1164.
——Organized lighting exhibits, *423.
Thomas, Percy H. Circle diagram for long lines, *899.
Thuerk, H. C. Central-station service most economical, *1112.
Thurston, E. B. High-speed elevator developments, *159.
Torda, Theodore. Compensated induction motor, *1205.
Toulmin, H. A., Jr. Patent purchases and license agreements, 586.
Tracy, C. R. How to sell illumination, *787.
Tyler, M. C. Wilson Dam—its cost and value, *739, editorial comment, 733. Comment (Barry Dibble), 1157.

U

UDE, W. H. Group insurance fills definite need, 573.
Underhill, Charles R. Power factor and its correction, 465. Comment (F. I. Hiss), 1055.

V

VINET, EUGENE. Distribution losses reduced by line surveys, 1158.
von Dannenberg, C. Otto. Installing pipe inserts in concrete foundations, *566.
Vose, Frederic P. Keeping up the spirit of service, 339.

W

WALLER, ALFRED E. Electric Power Club as a business asset, 873.
Walsh, W. J. Converting an oil-fired furnace to electric heating, *1110.
Wardlaw, F. A. Albert Edward Winchester—an appreciation, 171.
Watson, C. G. Conductor joints for underground cables, *371.
Weaver, Robert L. West Penn Power Company challenges Zschornewitz, 1208.
Weller, F. M. Value of industrial load census, *1051.
Wensley, R. T. Centralized supervision of automatic substation system, *1259.
Western, G. W. Placing the brackets in the home, 21.
Wheadon, F. W. H. New Australian central power house, *1097.
——Distribution practice in Australia, *221.
——Transformer substations in Australia, *466.
——Transmission practice in Australia, *1159.
——Washing dirty insulators with fine water spray, 273.
Wilkinson, W. D. Relay maintenance practice, *700.
Wilson, A. M. Power companies and the merchandising of radio equipment, 699.
Wilson, E. F. Purchased power versus private plant, 755.
Wipperman, F. B. Power factor correction by motors, 855.
Wollaber, A. B. Collections and public relations, 842.
——Trouble crew and maintenance department, 1207.
Wyss, L. W. Tests for melting sleet on transmission lines, *466.

Y

YODER, C. P. Industrial electric heat, 503, 559.
Young, H. E. Utilities part in selling refrigerators, 896.

Z

ZIEGLER, O. D. Utility company as traffic signal consultant, 800.

*Indicates illustrated articles

PERSONAL INDEX

A

Ahearn, Thomas 434
Alexanderson, E. F. W. 88
Alexander, Jefferson L. 89
Allen, C. J. 89
Allen, C. V. 970
Allen, G. G. 1276
Allen, George Young 1072
Alling, Sydney 921
Allison, H. H. 482
Amsden, B. R. 386, 668
Anderson, B. E. 584
Anderson, John *386
Andrus, Lucius B. 920
Anderson, P. Arnold 140
Atkinson, Kerr 818
Avis, Floyd D. *88

B

Bachman, Robert A. 190
Bailey, H. 35
Bak, A. Kristian 1227
Baker, W. T. 768
Baldwin, George P. 1124
Barber, George 970
Barden, H. E. 970
Barnes, Donald C. 89
Barnett, F. C. 190
Barr, Neal K. 969
Barrie, Clarence O. 870
Batcheller, Willis T. 140
Bates, Harold 386
Beals, Jacobs I. 533
Bean, Edwin J. 434
Beck, Sir Adam *379
Editorial comment 351
Becker, Raymond A. 1124
Beechinor, Herbert M. 289
Beggs, John I. *865
Behnke, Richard E. 921
Bell, C. H. 35
Bensel, Arlington 139
Berry, C. Harold 386
Berry, Dr. E. R. 1328
Berry, V. W. 482
Best, K. H. 921
Bibbins, Tracy E. *140
Black, F. M. 336
Blass, Elwood 88
Boettcher, W. W. 482
Boland, William H. 1328
Bollmeyer, Fred J. 482
Boonstra, Richard 716
Bosson, F. E. 584
Bothwell, John H. 818
Bowles, Russell 189
Boyau, Jean 1226
Boyd, Walter R. 921
Bracken, W. T. 482
Brackett, Dr. B. B. 140
Bradley, Luke C. 89
Braunig, H. E. 1124
Breitinger, C. M. *482
Brewer, C. M. 716
Brewer, Charles S. 89
Bristol, Dr. Herbert *237
Britt, James R. 336
Brown, J. P. W. *1226
Brown, W. E. *1227
Bucher, G. H. 386
Buchli, A. 716
Buckwalter, T. V. 189
Burchard, Anson W. 89
Burd, E. M. 1329
Burke, Walter H. 89
Burrows, W. R. 533
Burt, Austin *1276
Butler, H. G. 189
Butler, Robert B. 387
Buttrick, Stedman 435

C

Callender, D. E. *1072
Callender, Sir Thomas O. *921
Canivet, Jean 140
Cannon, Arthur H. 140
Carpenter, William M. 768
Cavalcanti, Leonardo de Albuquerque 140
Chadbourne, Dean K. 818, *870
Chadwick, Gilbert L. 288
Chamblin, Clyde 237
Chandler, Major R. W. 289
Chapman, E. 969
Chatterton, E. 1021
Clark, George A. 190
Clark, Harold H. 140
Clark, J. B. 669
Clifford, George H. 89
Cloen, Frederick 584
Cochran, R. D. 969
Coleman, F. W. 387
Combes, F. R. 337
Condit, Sears Byron *502
Cook, Fred H. 969
Coolidge, Dr. W. D. 190
Consler, Walter J. 921
Corby, T. A. 139
Cornell, A. C. 89
Cortelyou, J. S. 1124
Cox, Holland E. 1021
Crago, Alan C. 818
Cravath, James R. 1226
Crippen, C. I. 1227
Crisp, George E. 921
Curtis, A. G. 533
Cyr, William A. 483

D

Daly, John M. 716
Darbyshire, H. F. 768
Davidson, A. E. 189
Davis, C. I. 89
Dawbarn, David I. 818
Day, Maxwell W. 921
De Lanty, Benjamin F. 716
De Laval, Carl George 768
De Lay, Frederic A. 336
Delf, Leslie E. 768
Diehm, Charles 970
Dinsmore, C. H. 189
Dixon, C. F. 921
Dixon, J. Alves 89
Dobson, C. F. 1124
Dodge, Austin R. 584
Dodge, James W. 190
Dolbeare, Walter I. 970
Dole, Eugene M. 435
Donald, G. A. 189
Donaldson, Roderick D. 921
Dornbrook, Fred 386
Douglas, W. L. 716
Dow, Alex 88
Dreese, E. E. 921
Drewry, M. K. 386
Drummond, A. H. 289
Drysdale, W. D. 1376
Duke, James B. *811
Editorial comment 783
Dunlap, William Stewart 768
Dunn, William Ellsworth 533
Dye, W. Earle 190

E

Ealand, Fred T. 289
Earle, Captain Ralph, U. S. N. 921
Eddy, Glenn H. 921
Edgar, B. C. *1226
Edgar, Harry T. 89
Egan, Sir Henry 921
Eglin, W. C. L. 237
Ellis, A. K. *1276
Emery, John R. 818
Emery, Loren 190
Emmons, George E. 336
Engelland, A. C. 1072
Erickson, Halford 1226
Eteson, Franklin C. 482
Evans, George B. 139
Evans, Harold 89
Evans, Lyness 386
Everest, R. J. 434

F

Fahrney, Charles E. 768, 870
Ferree, L. L. *1124
Fiorani, Louis A. 482
Firman, Leo. D. 190
Flagg, Samuel B. 434
Fleet, Arthur H. 1021
Flynn, Thomas F. 1328
Flynn, William B. 288
Fogerty, J. S. 336
Foley, Terrence H. 483
Forath, C. J. 35
Forsyth, A. L. 190
Foster, Elwin C. 288
Fraser, J. F. 482
Frech, T. W. 533
Fuessenich, H. Blake 435
Fulford, T. D. 970
Fuller, Franklin I. 1276
Funkhouser, Robert D. 668
Furlong, William G. 870

G

Gales, A. P. 533
Garth, Robert M. 190
Geisse, Harold L. 584
Geraty, G. Case, Jr. 1021
Gillespie, C. W. 1124
Goob, Charles F. 336
Gooding, R. F. 435
Gordon, Frank C. 190, 288
Gould, H. A. 190
Graf, Robert J. 1226
Green, C. J. 1226
Grote, George F. 1021
Gude, O. J. 387
Gwinn, A. R. 237

H

Haigh, R. A. 190
Haines, Thomas H. 35
Halliwell, Reginald F. 1021
Hamblen, Edward D. 482
Hamilton, Stacy 818
Harl, William 970
Harris, C. H. 190
Harris, D. E. 434
Hartzel, E. K. 483
Harvey, Taylor C. 870
Harvin, C. J. 288
Haskin, J. R. 189
Hayes, J. B. 1227
Hazard, Frederick E. 533
Healey, John D. 337
Heed, S. D. 1328
Hees, J. Ledlie 288
Hellmers, C. C. 870
Henby, W. W. 818
Henderson, R. G. 190
Hendry, A. B. 483
Hernion, W. N. 434
Herrmann, A. H. 139
Hill, Herbert C. 668
Hinchliff, E. L. 970
Hinsdale, J. H. 584
Hirshfeld, C. F. *668
Hiss, Fielder I. 88
Hoadley, H. E. 288
Hodges, Earle W. 1276
Holben, Wilmer P. 288
Holcomb, Eugene 920
Holman, Charles L. 139
Holman, William D. 584
Hopson, H. C. 716
Hopkins, Nelson S. 237
Houghton, A. J., Jr. 969
Housekeeper, William G. 768
Howard, B. K. 921
Hudson, Walter F. 1124
Hughes, Robert E. 970
Hunter, E. E. 89
Hunter, G. G. G. 237
Hutchinson, Charles L. 434
Hyde, Dr. Edward P. 1124

I

Ingham, George W. W. 337
Innes, Frank R. 1021
Insull, Martin J. 288
Insull, Samuel 386, 1328
Ito, Dr. Keiji 1328

J

Jackson, Dugald C., Jr. 288
James, R. L. 1329
James, W. F. 1124
Jamison, Frank R. 336
Janes, L. R. 190
Johnson, C. A. 337
Johnson, Harold S. 1226
Johnson, J. R. 336
Johnson, Josiah Francis 1072
Johnston, W. D. *434
Jones, George S., Jr. 818
Jones, H. H. 1124
Jones, J. B. 584
Jordan, S. N. 387
Jourdan, Albert S. 89

K

Kahn, Samuel 1072
Kalp, C. F. 35
Keefe, T. F. 288
Keeney, Robert M. 1021
Keith, Fraser S. 237
Kellogg, C. W. *970
Kelly, J. W. 288
Kemper, G. Carl 190
Kennedy, C. S. *237
Kennedy, James C. 533
Kennedy, T. O. 1072
Keyes, C. B. 1227
Kilburn, Edward D. *818
Kilmarx, Louis E. 768
King, Cecil W. 140
King, E. E. 434, 921
Kingsbury, E. J. 434
Kirby, R. C. 387
Kirk, A. F. 190
Knost, William A. 386
Knowlen, J. S. 434
Kohler, A. J. 921
Kohlhepp, C. E. 1226
Koiner, C. W. 89
Konstantinowsky, Dr. Kurt 533
Kuhlman, J. H. 189
Kumler, R. C. 337
Kurtz, Edwin 716

L

Ladd, Allan W. 969
Lang, Philip A. 969
Lariviere, H. 237
Larrett, James E. 35
Lawrenz, George J. 386
Learnard, George E. 237
Learned, C. A. 584
Lee, Knox 533
Leighton, Charles L. 483
Lewis, H. A. *1328
Lillie, Ralph B. 386
Lindley, Robert W. 970
Lindsey, R. L. 1072

*Indicates illustrated articles

Lindsley, G. L. 970
Lines, W. H. 35
Ling, Benjamin E. 386
Little, Arthur F. 88
Lloyd, E. W. 533
Loney, A. G. 716
Long, E. L. 584
Long, J. V. 288
Loria, David J. 139
Lothrop, Milton, Jr. 716
Lovett, Fremont L. 870
Lucas, H. B. 189
Ludden, Homer 818, 969
Lyndon, Lamar 434
Lytle, H. M. 386

M

MacGuinness, R. B. 89
Machold, H. Edmund 434, 584
MacKay, H. C. 1226
MacNaughton, David 190
Magee, S. J. 336
Magruder, E. C. 482
Mailloux, C. O. 818
Malone, J. R. 190
Maloney, A. J. 190
Mange, J. I. 337, 716
Mann, H. L. 435
Manville, Thomas F. 870
Marchant, R. B. 337
Martin, Edwin R. 189, 482
Massa, Louis F. 190
Mattson, Thomas E. 336
Maxwell, John F. 190, 668
Mayo, Joseph 483
McCall, Malcolm J. 434
McCann, William R. 970
McCarty, R. S. 288
McClenahan, Dean Howard 190
McClure, L. H. 89
McClure, R. W. 189
McDonald, D. B. 668
McGorum, William B. 1124
McKinney, Harry D. 139
McLaughlin, J. F. 89, 139
McLean, G. E. 190
McLimont, A. W. 190
McMillan, Luther B. 969
McPherson, R. B. 818
McSorley, William J. 768
Meacham, E. R. 482
Meekler, Louis M. 190
Merkle, A. J. 716
Merrick, F. A. 88
Merrill, O. C. 189
Meyer, Frank J. 336
Miller, John B. *88
Miller, Robert 35
Miller, William J. 969
Milne, George Duncan 387
Minor, Clark H. 139
Montgomery, Robert 190
Moody, C. E. 482
Moore, B. H. 288
Moore, David H. 668
Moore, Irwin L. 969
Morgan, George B. 1124
Morgan, J. C. 289
Moriarty, A. F. 190, 533
Morrissen, P. J. *716
Morrison, M. A. 1226
Morrow, Rush B. 818
Morton, A. C. 969
Moses, Everett 1072
Moses, Rufus 435
Murray, S. C. 768
Myers, David Moffat 482

N

Nason, C. S. 88
Nayler, J. B. 189
Needland, Marvin A. 768
Neil, H. A. 190
Neiswanger, E. B. *716
Nesbitt, A. J. 139
Nethken, C. E. 386
Nettleton, Charles H. 970
Newbern, Guy P. 1276
Nichols, Dr. Harold W. 1072
Nickerson, H. L. 533
Nikiforoff, B. 189
Noack, H. R. 434
Nock, Herbert K. 336
Nolen, J. T. 387
Norris, Prof. Henry H. 669

O

O'Keeffe, M. C. 716
Olaison, C. E. 483
Olcott, Robert 870
Osborne, G. C. 533
Otterson, John W. 482
Outtrim, William H. 483

P

Page, A. D. 533
Paine, Frank D. *1276
Painter, James P. 818
Palk, Lawrence 1021
Palmer, Ray *189
Palmer, Sumner C., Jr. 288
Pardee, John H. 337
Park, Arthur W. 716
Parker, B. L. 969
Parker, Thomas T. *288
Parsons, H. M. 482
Partridge, Warren 716
Patchell, William Henry 434
Patterson, Charles E. 1124
Patterson, Wayne 669
Patchell, Wm. Henry 1072
Paxton, P. L. 35
Pearson, H. B. 35
Peck, Emerson P. *969, 768
Pendleton, Mark 435
Penney, Geo. 870
Perley, Frank G. 1276
Phenicie, C. R. 1226
Philo, F. G. 669, 921
Phin, W. E. 88
Pickles, William 1329
Pigott, R. J. S. 190
Pillers, E. L. 668
Planche, C. 336
Poindexter, Alfred M. 387
Porter, John H. 434
Portnell, J. R. 89
Potter, J. Lee 1276
Powers, Thomas H. 870
Prager, Arthur *870
Pratt A. Stuart 89
Price, W. A. 969
Pulliam, J. P. 1226
Purcell, Thomas E. 35
Putnam, H. V. 387
Putnam, William H. 584

Q

Quentin, George W. 1328
Quimby, Malcolm J. 970

R

Randall, Frank W. 921
Randall, Russell 969
Rands, H. A. 140
Reagan, Wm. J. 768, *1021
Reed, Harrison Pierce 1021
Reilly, E. A. (K. C.) 716
Reilly, Harry W. 289
Rentchler, C. E. 337
Reynolds, T. W. 35
Riegel, Louis C. 584
Riegel, L. F. 970
Riley, Robert A. 288
Ring, Charles N. 237
Roehry, E. A. 1329
Rogers, Clayton T. 970
Rosenbaum, R. V. 89
Ruffner, Charles S. *35
Rugg, Walter S. *818
Rugless, E. O. 289
Rush, W. L. 237
Ryan, E. 88
Ryan, Harris J. *1219
Rypinski, M. C. 818

S

Salt, Albert Lincoln *1330
Sanborn, H. L. 140
Saubert, H. M. 1124
Sawyer, Harry S. 1227
Schluss, K. C. 190
Schoellkopf, Paul A. 1124
Schou, Theodore 969
Schurch, John F. 237
Schuurman, J. Elink 768
Schwabe, Walter P. 1227
Schwennicke, Carl 669
Scott, H. G. *336
Seabrook, Henry H. 584
Seaman, Wm. E. 189
Searing, Hudson R. 969
Semrad, Charles A. *584
Sharp, L. O. 584
Sharples, Harry 1124
Shaw, T. D. 1226
Shawlin, Roy Edward 89
Sheehe, B. J. 288
Shepardson, Dr. George D. 139
Shepherd, R. L. 920
Sherin, G. W. 237
Sherrard, T. H. 289
Shevlin, Edward B. 870
Shipp, Grady 189
Shoudy, W. A. 140, 1021
Sickman, Albert Franklin 970
Sifton, Sir Clifford 35
Sifton, Harry 35
Sistare, Donald B. 768
Sleeper, Harvey P. 190
Sloat, R. G. 482
Smith, A. H. 1226
Smith, Clement C. 1226
Smith, David 768
Smith, Frank L. 435
Smith, J. Allan, Jr. 818
Smith, J. Brodie 288
Smith, Ralph A. 969-970
Smoke, C. H. 716
Snider, Howard N. 190
Snyder, E. F. 289
Snyder, H. L. 190
Snyder, Otto 88
Sonnenfeld, Hugo 533
Speer, John S. 237
Sperry, M. L. 89
Spofford, R. W. 1227
Stack, A. H. 140
Stack, Geo. H. 768, 1021
Stahler, L. L. 482
Steele, Frank B. 768, *969
Stettinius, Edward R. 533
Stevenson, James R. 386
Stewart, C. C. 336
Stone, Leon T. 189, 482
Studebaker, Clement 584
Swift, Charles M. 337

T

Tallman, V. M. F. 920
Taylor, B. T. 482
Tepel, H. A. 1072
Thomann, E. 716
Thompson, R. I. 434
Tirrill, Allen A. 1021
Toeppen, Manfred K. 1226
Towner, Neile F. 870
Tracy, Charles R. 1329
Triplett, H. A. 288
Tuttle, George M. 584

U

Urrutia y Zuluetia, Don Juan 435

V

Valentine, Herbert S. 35
Van Derzee, G. W. *386
Veitch, Rolland T. 768
Vincent, H. B. 139

W

Wait, C. A. 189
Waite, R. P. 435, 669
Walker, Cedric J. 668
Walker, James S., Jr. 1329
Walker, N. J. 1329
Walton, W. C. 189
Ward, George Clinton *56
Watson, I. H. 1227
Way, S. B. *920
Webster, Frederic E. 35
Wentworth, P. M. 1227
Werth, Jamor James R. 139
Wetterer, C. F. W. 89
Wheatlake, B. C. J. 78
Wheelwright, Thomas S. 139
White, Bryant 89
White, John V. 920
Whitehead, Dr. J. B. *920
Wichman, Ralph D. 336
Wilcox, Francis Wallace 1227
Wilcox, Raymond 434
Wilder, L. R. 768
Williams, Arthur 434
Williams, G. B. 139
Williams, L. M. 190
Williams, P. R. 1124
Williams, Roger 669
Wills, Edward 1227
Wilson, E. F. 921
Wilson, James E. 870
Winchester, Albert E. 89, 171
Wolfers, Robert 1124
Wood, James R. 336
Wood, Wm. E. 89, 139, 189
Woodbury, Edward 969
Woodvatt, J. B. 139
Woolfson, Monroe G. 1072
Wyman, W. S. *584

Y

Yorath, C. J. 140
Young, Owen, D. 189, 920

Z

Ziegler, Edward F. 139

*Indicates illustrated articles